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# FOUR-PLACE TABLES OF LOGARITHMS

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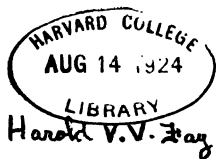
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## TABLE I

### FOUR-PLACE LOGARITHMS OF NUMBERS

This table gives the mantissas of the common logarithms (base 10) of the natural numbers (integers) from 1 to 2000, calculated to four places of decimals.

A logarithm found from this table by interpolation may be in error by one unit in the last decimal place.

TABLE I. LOGARITHMS OF NUMBERS

No.	0	1	2	3	4	5	6	7	8	9	Prop. Parts	
100	0000	0004	0009	0013	0017	0022	0026	0030	0035	0039	Extra digit	Difference
101	0043	0048	0052	0056	0060	0065	0069	0073	0077	0082		
102	0086	0090	0095	0099	0103	0107	0111	0116	0120	0124		
103	0128	0133	0137	0141	0145	0149	0154	0158	0162	0166		
104	0170	0175	0179	0183	0187	0191	0195	0199	0204	0208		
105	0212	0216	0220	0224	0228	0233	0237	0241	0245	0249		
106	0253	0257	0261	0265	0269	0273	0278	0282	0286	0290		
107	0294	0298	0302	0306	0310	0314	0318	0322	0326	0330		
108	0334	0338	0342	0346	0350	0354	0358	0362	0366	0370		
109	0374	0378	0382	0386	0390	0394	0398	0402	0406	0410		
110	0414	0418	0422	0426	0430	0434	0438	0441	0445	0449	1 2 3 4 5 6 7 8 9	5 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5
111	0453	0457	0461	0465	0469	0473	0477	0481	0484	0488		
112	0492	0496	0500	0504	0508	0512	0515	0519	0523	0527		
113	0531	0535	0538	0542	0546	0550	0554	0558	0561	0565		
114	0569	0573	0577	0580	0584	0588	0592	0596	0599	0603		
115	0607	0611	0615	0618	0622	0626	0630	0633	0637	0641		
116	0645	0648	0652	0656	0660	0663	0667	0671	0674	0678		
117	0682	0686	0689	0693	0697	0700	0704	0708	0711	0715		
118	0719	0722	0726	0730	0734	0737	0741	0745	0748	0752		
119	0755	0759	0763	0766	0770	0774	0777	0781	0785	0788		
120	0792	0795	0799	0803	0806	0810	0813	0817	0821	0824	1 2 3 4 5 6 7 8 9	4 0.4 0.8 1.2 1.6 2.0 2.4 2.8 3.2 3.6
121	0828	0831	0835	0839	0842	0846	0849	0853	0856	0860		
122	0864	0867	0871	0874	0878	0881	0885	0888	0892	0896		
123	0899	0903	0906	0910	0913	0917	0920	0924	0927	0931		
124	0934	0938	0941	0945	0948	0952	0955	0959	0962	0966		
125	0969	0973	0976	0980	0983	0986	0990	0993	0997	1000		
126	1004	1007	1011	1014	1017	1021	1024	1028	1031	1035		
127	1038	1041	1045	1048	1052	1055	1059	1062	1065	1069		
128	1072	1075	1079	1082	1086	1089	1093	1096	1099	1103		
129	1106	1109	1113	1116	1119	1123	1126	1129	1133	1136		
130	1139	1143	1146	1149	1153	1156	1159	1163	1166	1169	1 2 3 4 5 6 7 8 9	3 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7
131	1173	1176	1179	1183	1186	1189	1193	1196	1199	1202		
132	1206	1209	1212	1216	1219	1222	1225	1229	1232	1235		
133	1239	1242	1245	1248	1252	1255	1258	1261	1265	1268		
134	1271	1274	1278	1281	1284	1287	1290	1294	1297	1300		
135	1303	1307	1310	1313	1316	1319	1323	1326	1329	1332		
136	1335	1339	1342	1345	1348	1351	1355	1358	1361	1364		
137	1367	1370	1374	1377	1380	1383	1386	1389	1392	1396		
138	1399	1402	1405	1408	1411	1414	1418	1421	1424	1427		
139	1430	1433	1436	1440	1443	1446	1449	1452	1455	1458		
140	1461	1464	1467	1471	1474	1477	1480	1483	1486	1489	1 2 3 4 5 6 7 8 9	2 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8
141	1492	1495	1498	1501	1504	1508	1511	1514	1517	1520		
142	1523	1526	1529	1532	1535	1538	1541	1544	1547	1550		
143	1553	1556	1559	1562	1565	1569	1572	1575	1578	1581		
144	1584	1587	1590	1593	1596	1599	1602	1605	1608	1611		
145	1614	1617	1620	1623	1626	1629	1632	1635	1638	1641		
146	1644	1647	1649	1652	1655	1658	1661	1664	1667	1670		
147	1673	1676	1679	1682	1685	1688	1691	1694	1697	1700		
148	1703	1706	1708	1711	1714	1717	1720	1723	1726	1729		
149	1732	1735	1738	1741	1744	1746	1749	1752	1755	1758		
150	1761	1764	1767	1770	1772	1775	1778	1781	1784	1787		
No.	0	1	2	3	4	5	6	7	8	9		

TABLE I. LOGARITHMS OF NUMBERS

No.	0	1	2	3	4	5	6	7	8	9	Prop. Parts	
150	1761	1764	1767	1770	1772	1775	1778	1781	1784	1787	Extra digit	Difference
151	1790	1793	1796	1798	1801	1804	1807	1810	1813	1816		
152	1818	1821	1824	1827	1830	1833	1836	1838	1841	1844		
153	1847	1850	1853	1855	1858	1861	1864	1867	1870	1872		
154	1875	1878	1881	1884	1886	1889	1892	1895	1898	1901		
155	1903	1906	1909	1912	1915	1917	1920	1923	1926	1928		
156	1931	1934	1937	1940	1942	1945	1948	1951	1953	1956		
157	1959	1962	1965	1967	1970	1973	1976	1978	1981	1984		
158	1987	1989	1992	1995	1998	2000	2003	2006	2009	2011		
159	2014	2017	2019	2022	2025	2028	2030	2033	2036	2038		
160	2041	2044	2047	2049	2052	2055	2057	2060	2063	2066	1	0.3
161	2068	2071	2074	2076	2079	2082	2084	2087	2090	2092	2	0.6
162	2095	2098	2101	2103	2106	2109	2111	2114	2117	2119	3	0.9
163	2122	2125	2127	2130	2133	2135	2138	2140	2143	2146	4	1.2
164	2148	2151	2154	2156	2159	2162	2164	2167	2170	2172	5	1.5
165	2175	2177	2180	2183	2185	2188	2191	2193	2196	2198	6	1.8
166	2201	2204	2206	2209	2212	2214	2217	2219	2222	2225	7	2.1
167	2227	2230	2232	2235	2238	2240	2243	2245	2248	2251	8	2.4
168	2253	2256	2258	2261	2263	2266	2269	2271	2274	2276	9	2.7
169	2279	2281	2284	2287	2289	2292	2294	2297	2299	2302		
170	2304	2307	2310	2312	2315	2317	2320	2322	2325	2327		
171	2330	2333	2335	2338	2340	2343	2345	2348	2350	2353		
172	2355	2358	2360	2363	2365	2368	2370	2373	2375	2378		
173	2380	2383	2385	2388	2390	2393	2395	2398	2400	2403		
174	2405	2408	2410	2413	2415	2418	2420	2423	2425	2428		
175	2430	2433	2435	2438	2440	2443	2445	2448	2450	2453		
176	2455	2458	2460	2463	2465	2467	2470	2472	2475	2477		
177	2480	2482	2485	2487	2490	2492	2494	2497	2499	2502		2
178	2504	2507	2509	2512	2514	2516	2519	2521	2524	2526		0.2
179	2529	2531	2533	2536	2538	2541	2543	2545	2548	2550		0.4
180	2553	2555	2558	2560	2562	2565	2567	2570	2572	2574		0.6
181	2577	2579	2582	2584	2586	2589	2591	2594	2596	2598		1.0
182	2601	2603	2605	2608	2610	2613	2615	2617	2620	2622		1.2
183	2625	2627	2629	2632	2634	2636	2639	2641	2643	2646		1.4
184	2648	2651	2653	2655	2658	2660	2662	2665	2667	2669		1.6
185	2672	2674	2676	2679	2681	2683	2686	2688	2690	2693		1.8
186	2695	2697	2700	2702	2704	2707	2709	2711	2714	2716		
187	2718	2721	2723	2725	2728	2730	2732	2735	2737	2739		
188	2742	2744	2746	2749	2751	2753	2755	2758	2760	2762		
189	2765	2767	2769	2772	2774	2776	2778	2781	2783	2785		
190	2788	2790	2792	2794	2797	2799	2801	2804	2806	2808		
191	2810	2813	2815	2817	2819	2822	2824	2826	2828	2831		
192	2833	2835	2838	2840	2842	2844	2847	2849	2851	2853		
193	2856	2858	2860	2862	2865	2867	2869	2871	2874	2876		
194	2878	2880	2883	2885	2887	2889	2891	2894	2896	2898		
195	2900	2903	2905	2907	2909	2911	2914	2916	2918	2920		
196	2923	2925	2927	2929	2931	2934	2936	2938	2940	2942		
197	2945	2947	2949	2951	2953	2956	2958	2960	2962	2964		
198	2967	2969	2971	2973	2975	2978	2980	2982	2984	2986		
199	2989	2991	2993	2995	2997	2999	3002	3004	3006	3008		
200	3010	3012	3015	3017	3019	3021	3023	3025	3028	3030		
No.	0	1	2	3	4	5	6	7	8	9		

No.	0	1	2	3	4	5	6	7	8	9	Prop. Parts		
											Extra digit	Difference	
20	3010	3032	3054	3075	3096	3118	3139	3160	3181	3201			
21	3222	3243	3263	3284	3304	3324	3345	3365	3385	3404			
22	3424	3444	3464	3483	3502	3522	3541	3560	3579	3598			
23	3617	3636	3655	3674	3692	3711	3729	3747	3766	3784			
24	3802	3820	3838	3856	3874	3892	3909	3927	3945	3962			
25	3979	3997	4014	4031	4048	4065	4082	4099	4116	4133			
26	4150	4166	4183	4200	4216	4232	4249	4265	4281	4298			
27	4314	4330	4346	4362	4378	4393	4409	4425	4440	4456			
28	4472	4487	4502	4518	4533	4548	4564	4579	4594	4609			
29	4624	4639	4654	4669	4683	4698	4713	4728	4742	4757			
30	4771	4786	4800	4814	4829	4843	4857	4871	4886	4900			
31	4914	4928	4942	4955	4969	4983	4997	5011	5024	5038			
32	5051	5065	5079	5092	5105	5119	5132	5145	5159	5172			
33	5185	5198	5211	5224	5237	5250	5263	5276	5289	5302			
34	5315	5328	5340	5353	5366	5378	5391	5403	5416	5428			
35	5441	5453	5465	5478	5490	5502	5514	5527	5539	5551			
36	5563	5575	5587	5599	5611	5623	5635	5647	5658	5670			
37	5682	5694	5705	5717	5729	5740	5752	5763	5775	5786			
38	5798	5809	5821	5832	5843	5855	5866	5877	5888	5900			
39	5911	5922	5933	5944	5955	5966	5977	5988	5999	6010			
40	6021	6031	6042	6053	6064	6075	6085	6096	6107	6117			
41	6128	6138	6149	6160	6170	6180	6191	6201	6212	6222			
42	6232	6243	6253	6263	6274	6284	6294	6304	6314	6325			
43	6335	6345	6355	6365	6375	6385	6395	6405	6415	6425			
44	6435	6444	6454	6464	6474	6484	6493	6503	6513	6522			
45	6532	6542	6551	6561	6571	6580	6590	6599	6609	6618			
46	6628	6637	6646	6656	6665	6675	6684	6693	6702	6712			
47	6721	6730	6739	6749	6758	6767	6776	6785	6794	6803			
48	6812	6821	6830	6839	6848	6857	6866	6875	6884	6893			
49	6902	6911	6920	6928	6937	6946	6955	6964	6972	6981			
50	6990	6998	7007	7016	7024	7033	7042	7050	7059	7067			
51	7076	7084	7093	7101	7110	7118	7126	7135	7143	7152			
52	7160	7168	7177	7185	7193	7202	7210	7218	7226	7235			
53	7243	7251	7259	7267	7275	7284	7292	7300	7308	7316			
54	7324	7332	7340	7348	7356	7364	7372	7380	7388	7396			
55	7404	7412	7419	7427	7435	7443	7451	7459	7466	7474			
56	7482	7490	7497	7505	7513	7520	7528	7536	7543	7551			
57	7559	7566	7574	7582	7589	7597	7604	7612	7619	7627			
58	7634	7642	7649	7657	7664	7672	7679	7686	7694	7701			
59	7709	7716	7723	7731	7738	7745	7752	7760	7767	7774			
60	7782	7789	7796	7803	7810	7818	7825	7832	7839	7846			
61	7853	7860	7868	7875	7882	7889	7896	7903	7910	7917			
62	7924	7931	7938	7945	7952	7959	7966	7973	7980	7987			
63	7993	8000	8007	8014	8021	8028	8035	8041	8048	8055			
64	8062	8069	8075	8082	8089	8096	8102	8109	8116	8122			
65	8129	8136	8142	8149	8156	8162	8169	8176	8182	8189			
66	8195	8202	8209	8215	8222	8228	8235	8241	8248	8254			
67	8261	8267	8274	8280	8287	8293	8299	8306	8312	8319			
68	8325	8331	8338	8344	8351	8357	8363	8370	8376	8382			
69	8388	8395	8401	8407	8414	8420	8426	8432	8439	8445			
70	8451	8457	8463	8470	8476	8482	8488	8494	8500	8506			
No.	0	1	2	3	4	5	6	7	8	9			

TABLE I. LOGARITHMS OF NUMBERS

No.	0	1	2	3	4	5	6	7	8	9	Prop. Parts		
											Ex. dig.	Difference	
70	8451	8457	8463	8470	8476	8482	8488	8494	8500	8506			
71	8513	8519	8525	8531	8537	8543	8549	8555	8561	8567			
72	8573	8579	8585	8591	8597	8603	8609	8615	8621	8627			
73	8633	8639	8645	8651	8657	8663	8669	8675	8681	8686			
74	8692	8698	8704	8710	8716	8722	8727	8733	8739	8745			
75	8751	8756	8762	8768	8774	8779	8785	8791	8797	8802			
76	8808	8814	8820	8825	8831	8837	8842	8848	8854	8859			
77	8865	8871	8876	8882	8887	8893	8899	8904	8910	8915			
78	8921	8927	8932	8938	8943	8949	8954	8960	8965	8971			
79	8976	8982	8987	8993	8998	9004	9009	9015	9020	9025			
80	9031	9036	9042	9047	9053	9058	9063	9069	9074	9079			
81	9085	9090	9096	9101	9106	9112	9117	9122	9128	9133			
82	9138	9143	9149	9154	9159	9165	9170	9175	9180	9186			
83	9191	9196	9201	9206	9212	9217	9222	9227	9232	9238			
84	9243	9248	9253	9258	9263	9269	9274	9279	9284	9289			
85	9294	9299	9304	9309	9315	9320	9325	9330	9335	9340			
86	9345	9350	9355	9360	9365	9370	9375	9380	9385	9390			
87	9395	9400	9405	9410	9415	9420	9425	9430	9435	9440			
88	9445	9450	9455	9460	9465	9469	9474	9479	9484	9489			
89	9494	9499	9504	9509	9513	9518	9523	9528	9533	9538			
90	9542	9547	9552	9557	9562	9566	9571	9576	9581	9586			
91	9590	9595	9600	9605	9609	9614	9619	9624	9628	9633			
92	9638	9643	9647	9652	9657	9661	9666	9671	9675	9680			
93	9685	9689	9694	9699	9703	9708	9713	9717	9722	9727			
94	9731	9736	9741	9745	9750	9754	9759	9763	9768	9773			
95	9777	9782	9786	9791	9795	9800	9805	9809	9814	9818			
96	9823	9827	9832	9836	9841	9845	9850	9854	9859	9863			
97	9868	9872	9877	9881	9886	9890	9894	9899	9903	9908			
98	9912	9917	9921	9926	9930	9934	9939	9943	9948	9952			
99	9956	9961	9965	9969	9974	9978	9983	9987	9991	9996			
100	0000	0004	0009	0013	0017	0022	0026	0030	0035	0039			
No.	0	1	2	3	4	5	6	7	8	9			

## RULES FOR FINDING THE LOGARITHMS OF THE TRIGONOMETRIC FUNCTIONS OF ANGLES NEAR $0^\circ$ AND $90^\circ$

The derivation of the following rules will be found on page 182, Granville's *Plane Trigonometry*.

If the angle is given in degrees, minutes, and seconds, it should first be reduced to degrees and the decimal part of a degree. For this purpose use the conversion table on page 17.

*Rule I. To find the Logarithms of the Functions of an Angle near  $0^\circ$ .\**

$$\log \sin x^\circ = \bar{2}.2419 + \log x.$$

$$\log \tan x^\circ = \bar{2}.2419 + \log x.$$

$$\log \cot x^\circ = 1.7581 - \log x.$$

$\log \cos x^\circ$  is found from the tables in the usual way.

*Rule II. To find the Logarithms of the Functions of an Angle near  $90^\circ$ .†*

$$\log \cos x^\circ = \bar{2}.2419 + \log (90 - x).$$

$$\log \cot x^\circ = \bar{2}.2419 + \log (90 - x).$$

$$\log \tan x^\circ = 1.7581 - \log (90 - x).$$

$\log \sin x^\circ$  is found from the tables in the usual way.

These rules will give results accurate to four decimal places for all angles between  $0^\circ$  and  $1.1^\circ$  and between  $88.9^\circ$  and  $90^\circ$ .

\* Example 1, page 182, Granville's *Plane Trigonometry*, illustrates the application of this rule.

† Example 2, page 183, Granville's *Plane Trigonometry*, illustrates the application of this rule.

## TABLE II

### FOUR-PLACE LOGARITHMS OF TRIGONOMETRIC FUNCTIONS, THE ANGLE BEING EXPRESSED IN DEGREES AND MINUTES

This table gives the common logarithms (base 10) of the sines, cosines, tangents, and cotangents of all angles from  $0^\circ$  to  $5^\circ$  and from  $85^\circ$  to  $90^\circ$  for each minute; and from  $5^\circ$  to  $85^\circ$  at intervals of 10 minutes, all calculated to four places of decimals. In order to avoid the printing of negative characteristics, the number 10 has been added to every logarithm in the first, second, and fourth columns (those having  $\log \sin$ ,  $\log \tan$ , and  $\log \cos$  at the top). Hence in writing down any logarithm taken from these three columns  $-10$  should be written after it. Logarithms taken from the third column (having  $\log \cot$  at the top) should be used as printed.

A logarithm found from this table by interpolation may be in error by one unit in the last decimal place, except for angles between  $0^\circ$  and  $18'$  or between  $89^\circ 42'$  and  $90^\circ$ , when the error may be larger. In the latter cases the table refers the student to the formulas on page 6 for more accurate results.

TABLE II. LOGARITHMIC SINES

0°							
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos	
0° 0'	—		—		—	10.0000	90° 00'
0° 1'	6.4637		6.4637		3.5363	10.0000	89° 59'
0° 2'	6.7648		6.7648		3.2352	10.0000	89° 58'
0° 3'	6.9408		6.9408		3.0592	10.0000	89° 57'
0° 4'	7.0658		7.0658		2.9342	10.0000	89° 56'
0° 5'	7.1627		7.1627		2.8373	10.0000	89° 55'
0° 6'	7.2419		7.2419		2.7581	10.0000	89° 54'
0° 7'	7.3088		7.3088		2.6912	10.0000	89° 53'
0° 8'	7.3668		7.3668		2.6332	10.0000	89° 52'
0° 9'	7.4180		7.4180		2.5820	10.0000	89° 51'
0° 10'	7.4637		7.4637		2.5363	10.0000	89° 50'
0° 11'	7.5051		7.5051		2.4949	10.0000	89° 49'
0° 12'	7.5429		7.5429		2.4571	10.0000	89° 48'
0° 13'	7.5777		7.5777		2.4223	10.0000	89° 47'
0° 14'	7.6099		7.6099		2.3901	10.0000	89° 46'
0° 15'	7.6398		7.6398		2.3602	10.0000	89° 45'
0° 16'	7.6678		7.6678		2.3322	10.0000	89° 44'
0° 17'	7.6942		7.6942		2.3058	10.0000	89° 43'
0° 18'	7.7190		7.7190		2.2810	10.0000	89° 42'
0° 19'	7.7425	235	7.7425	235	2.2575	10.0000	89° 41'
0° 20'	7.7648	223	7.7648	223	2.2352	10.0000	89° 40'
0° 21'	7.7859	211	7.7860	212	2.2140	10.0000	89° 39'
0° 22'	7.8061	202	7.8062	202	2.1938	10.0000	89° 38'
0° 23'	7.8255	194	7.8255	193	2.1745	10.0000	89° 37'
0° 24'	7.8439	184	7.8439	184	2.1561	10.0000	89° 36'
0° 25'	7.8617	178	7.8617	178	2.1383	10.0000	89° 35'
0° 26'	7.8787	170	7.8787	170	2.1213	10.0000	89° 34'
0° 27'	7.8951	164	7.8951	164	2.1049	10.0000	89° 33'
0° 28'	7.9109	158	7.9109	158	2.0891	10.0000	89° 32'
0° 29'	7.9261	152	7.9261	152	2.0739	10.0000	89° 31'
0° 30'	7.9408	147	7.9409	148	2.0591	10.0000	89° 30'
0° 31'	7.9551	143	7.9551	143	2.0449	10.0000	89° 29'
0° 32'	7.9689	138	7.9689	138	2.0311	10.0000	89° 28'
0° 33'	7.9822	133	7.9823	134	2.0177	10.0000	89° 27'
0° 34'	7.9952	130	7.9952	129	2.0048	10.0000	89° 26'
0° 35'	8.0078	126	8.0078	126	1.9922	10.0000	89° 25'
0° 36'	8.0200	122	8.0200	122	1.9800	10.0000	89° 24'
0° 37'	8.0319	119	8.0319	119	1.9681	10.0000	89° 23'
0° 38'	8.0435	116	8.0435	116	1.9565	10.0000	89° 22'
0° 39'	8.0548	113	8.0548	113	1.9452	10.0000	89° 21'
0° 40'	8.0658	110	8.0658	110	1.9342	10.0000	89° 20'
0° 41'	8.0765	107	8.0765	107	1.9235	10.0000	89° 19'
0° 42'	8.0870	105	8.0870	105	1.9130	10.0000	89° 18'</



## 9

1°						
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos
1° 0'	8.2419		8.2419		1.7581	9.9999
1° 1'	8.2490	71	8.2491	72	1.7509	9.9999
1° 2'	8.2561	71	8.2562	71	1.7438	9.9999
1° 3'	8.2630	69	8.2631	69	1.7369	9.9999
1° 4'	8.2699	69	8.2700	69	1.7300	9.9999
1° 5'	8.2766	67	8.2767	67	1.7233	9.9999
1° 6'	8.2832	66	8.2833	66	1.7167	9.9999
1° 7'	8.2898	66	8.2899	66	1.7101	9.9999
1° 8'	8.2962	64	8.2963	64	1.7037	9.9999
1° 9'	8.3025	63	8.3026	63	1.6974	9.9999
1° 10'	8.3088	63	8.3089	63	1.6911	9.9999
1° 11'	8.3150	62	8.3150	61	1.6850	9.9999
1° 12'	8.3210	60	8.3211	61	1.6789	9.9999
1° 13'	8.3270	60	8.3271	60	1.6729	9.9999
1° 14'	8.3329	59	8.3330	59	1.6670	9.9999
1° 15'	8.3388	59	8.3389	59	1.6611	9.9999
1° 16'	8.3445	57	8.3446	57	1.6554	9.9999
1° 17'	8.3502	57	8.3503	56	1.6497	9.9999
1° 18'	8.3558	56	8.3559	56	1.6441	9.9999
1° 19'	8.3613	55	8.3614	55	1.6386	9.9999
1° 20'	8.3668	55	8.3669	55	1.6331	9.9999
1° 21'	8.3722	54	8.3723	54	1.6277	9.9999
1° 22'	8.3775	53	8.3776	53	1.6224	9.9999
1° 23'	8.3828	53	8.3829	53	1.6171	9.9999
1° 24'	8.3880	52	8.3881	52	1.6119	9.9999
1° 25'	8.3931	51	8.3932	51	1.6068	9.9999
1° 26'	8.3982	51	8.3983	51	1.6017	9.9999
1° 27'	8.4032	50	8.4033	50	1.5967	9.9999
1° 28'	8.4082	50	8.4083	50	1.5917	9.9999
1° 29'	8.4131	49	8.4132	49	1.5868	9.9999
1° 30'	8.4179	49	8.4181	49	1.5819	9.9999
1° 31'	8.4227	48	8.4229	48	1.5771	9.9998
1° 32'	8.4275	48	8.4276	47	1.5724	9.9998
1° 33'	8.4322	47	8.4323	47	1.5677	9.9998
1° 34'	8.4368	46	8.4370	47	1.5630	9.9998
1° 35'	8.4414	46	8.4416	46	1.5584	9.9998
1° 36'	8.4459	45	8.4461	45	1.5539	9.9998
1° 37'	8.4504	45	8.4506	45	1.5494	9.9998
1° 38'	8.4549	45	8.4551	45	1.5449	9.9998
1° 39'	8.4593	44	8.4595	44	1.5405	9.9998
1° 40'	8.4637	44	8.4638	43	1.5362	9.9998
1° 41'	8.4680	43	8.4682	44	1.5318	9.9998
1° 42'	8.4723	43	8.4725	43	1.5275	9.9998
1° 43'	8.4765	42	8.4767	42	1.5233	9.9998
1° 44'	8.4807	42	8.4809	42	1.5191	9.9998
1° 45'	8.4848	41	8.4851	42	1.5149	9.9998
1° 46'	8.4890	42	8.4892	41	1.5108	9.9998
1° 47'	8.4930	40	8.4933	41	1.5067	9.9998
1° 48'	8.4971	41	8.4973	40	1.5027	9.9998

TABLE II. LOGARITHMIC SINES

2°							
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos	
2° 0'	8.5428		8.5431		1.4569	9.9997	87° 60'
2° 1'	8.5464	36	8.5467	36	1.4533	9.9997	87° 59'
2° 2'	8.5500	36	8.5503	36	1.4497	9.9997	87° 58'
2° 3'	8.5535	35	8.5538	35	1.4462	9.9997	87° 57'
2° 4'	8.5571	36	8.5573	35	1.4427	9.9997	87° 56'
2° 5'	8.5605	34	8.5608	35	1.4392	9.9997	87° 55'
2° 6'	8.5640	35	8.5643	35	1.4357	9.9997	87° 54'
2° 7'	8.5674	34	8.5677	34	1.4323	9.9997	87° 53'
2° 8'	8.5708	34	8.5711	34	1.4289	9.9997	87° 52'
2° 9'	8.5742	34	8.5745	34	1.4255	9.9997	87° 51'
2° 10'	8.5776	34	8.5779	34	1.4221	9.9997	87° 50'
2° 11'	8.5809	33	8.5812	33	1.4188	9.9997	87° 49'
2° 12'	8.5842	33	8.5845	33	1.4155	9.9997	87° 48'
2° 13'	8.5875	33	8.5878	33	1.4122	9.9997	87° 47'
2° 14'	8.5907	32	8.5911	32	1.4089	9.9997	87° 46'
2° 15'	8.5939	32	8.5943	32	1.4057	9.9997	87° 45'
2° 16'	8.5972	33	8.5975	32	1.4025	9.9997	87° 44'
2° 17'	8.6003	31	8.6007	32	1.3993	9.9997	87° 43'
2° 18'	8.6035	32	8.6038	31	1.3962	9.9997	87° 42'
2° 19'	8.6066	31	8.6070	32	1.3930	9.9996	87° 41'
2° 20'	8.6097	31	8.6101	31	1.3899	9.9996	87° 40'
2° 21'	8.6128	31	8.6132	31	1.3868	9.9996	87° 39'
2° 22'	8.6159	30	8.6163	31	1.3837	9.9996	87° 38'
2° 23'	8.6189	30	8.6193	30	1.3807	9.9996	87° 37'
2° 24'	8.6220	30	8.6223	30	1.3777	9.9996	87° 36'
2° 25'	8.6250	30	8.6254	31	1.3746	9.9996	87° 35'
2° 26'	8.6279	29	8.6283	29	1.3717	9.9996	87° 34'
2° 27'	8.6309	30	8.6313	30	1.3687	9.9996	87° 33'
2° 28'	8.6339	30	8.6343	30	1.3657	9.9996	87° 32'
2° 29'	8.6368	29	8.6372	29	1.3628	9.9996	87° 31'
2° 30'	8.6397	29	8.6401	29	1.3599	9.9996	87° 30'
2° 31'	8.6426	28	8.6430	29	1.3570	9.9996	87° 29'
2° 32'	8.6454	28	8.6459	29	1.3541	9.9996	87° 28'
2° 33'	8.6483	28	8.6487	28	1.3513	9.9996	87° 27'
2° 34'	8.6511	28	8.6515	28	1.3485	9.9996	87° 26'
2° 35'	8.6539	28	8.6544	29	1.3456	9.9996	87° 25'
2° 36'	8.6567	28	8.6571	27	1.3429	9.9996	87° 24'
2° 37'	8.6595	28	8.6599	28	1.3401	9.9995	87° 23'
2° 38'	8.6622	27	8.6627	28	1.3373	9.9995	87° 22'
2° 39'	8.6650	28	8.6654	27	1.3346	9.9995	87° 21'
2° 40'	8.6677	27	8.6682	28	1.3318	9.9995	87° 20'
2° 41'	8.6704	27	8.6709	27	1.3291	9.9995	87° 19'
2° 42'	8.6731	27	8.6736	27	1.3264	9.9995	87° 18'
2° 43'	8.6758	26	8.6762	26	1.3238	9.9995	87° 17'
2° 44'	8.6784	26	8.6789	26	1.3211	9.9995	87° 16'
2° 45'	8.6810	26	8.6815	26	1.3185	9.9995	87° 15'
2° 46'	8.6837	27	8.6842	27	1.3158	9.9995	87° 14'
2° 47'	8.6863	26	8.6868	26	1.3132	9.9995	87° 13'
2° 48'	8.6889	26	8.6894	26	1.3106	9.9995	87° 12'
2° 49'	8.6914	25	8.6920	26	1.3080	9.9995	87° 11'
2° 50'	8.6940	25	8.6945	25	1.3055	9.9995	87° 10'
2° 51'	8.6965	26	8.6971	25	1.3029	9.9995	87° 9'
2° 52'	8.6991	25	8.6996	25	1.3004	9.9995	87° 8'
2° 53'	8.7016	25	8.7021	25	1.2979	9.9995	87° 7'
2° 54'	8.7041	25	8.7046	25	1.2954	9.9994	87° 6'
2° 55'	8.7066	25	8.7071	25	1.2929	9.9994	87° 5'
2° 56'	8.7090	24	8.7096	25	1.2904	9.9994	87° 4'
2° 57'	8.7115	25	8.7121	25	1.2879	9.9994	87° 3'
2° 58'	8.7140	24	8.7145	24	1.2855	9.9994	87° 2'
2° 59'	8.7164	24	8.7170	25	1.2830	9.9994	87° 1'
2° 60'	8.7188	24	8.7194	24	1.2806	9.9994	87° 0'
	log cos	diff. 1'	log cot	com. diff. 1'	log tan	log sin	Angle

87°

3°						
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos
3° 0'	8.7188	24	8.7194	24	1.2806	9.9994
3° 1'	8.7212	24	8.7218	24	1.2782	9.9994
3° 2'	8.7236	24	8.7242	24	1.2758	9.9994
3° 3'	8.7260	24	8.7266	24	1.2734	9.9994
3° 4'	8.7283	23	8.7290	23	1.2710	9.9994
3° 5'	8.7307	24	8.7313	23	1.2687	9.9994
3° 6'	8.7330	23	8.7337	24	1.2663	9.9994
3° 7'	8.7354	24	8.7360	23	1.2640	9.9994
3° 8'	8.7377	23	8.7383	23	1.2617	9.9994
3° 9'	8.7400	23	8.7406	23	1.2594	9.9993
3° 10'	8.7423	22	8.7429	23	1.2571	9.9993
3° 11'	8.7445	23	8.7452	23	1.2548	9.9993
3° 12'	8.7468	23	8.7475	22	1.2525	9.9993
3° 13'	8.7491	22	8.7497	22	1.2503	9.9993
3° 14'	8.7513	22	8.7520	23	1.2480	9.9993
3° 15'	8.7535	22	8.7542	22	1.2458	9.9993
3° 16'	8.7557	23	8.7565	23	1.2435	9.9993
3° 17'	8.7580	22	8.7587	22	1.2413	9.9993
3° 18'	8.7602	21	8.7609	22	1.2391	9.9993
3° 19'	8.7623	22	8.7631	21	1.2369	9.9993
3° 20'	8.7645	22	8.7652	22	1.2348	9.9993
3° 21'	8.7667	21	8.7674	22	1.2326	9.9993
3° 22'	8.7688	22	8.7696	21	1.2304	9.9993
3° 23'	8.7710	21	8.7717	22	1.2283	9.9992
3° 24'	8.7731	21	8.7739	21	1.2261	9.9992
3° 25'	8.7752	21	8.7760	21	1.2240	9.9992
3° 26'	8.7773	21	8.7781	21	1.2219	9.9992
3° 27'	8.7794	21	8.7802	21	1.2198	9.9992
3° 28'	8.7815	21	8.7823	21	1.2177	9.9992
3° 29'	8.7836	21	8.7844	21	1.2156	9.9992
3° 30'	8.7857	20	8.7865	21	1.2135	9.9992
3° 31'	8.7877	21	8.7886	20	1.2114	9.9992
3° 32'	8.7898	20	8.7906	21	1.2094	9.9992
3° 33'	8.7918	21	8.7927	20	1.2073	9.9992
3° 34'	8.7939	20	8.7947	20	1.2053	9.9992
3° 35'	8.7959	20	8.7967	21	1.2033	9.9992
3° 36'	8.7979	20	8.7988	20	1.2012	9.9991
3° 37'	8.7999	20	8.8008	20	1.1992	9.9991
3° 38'	8.8019	20	8.8028	20	1.1972	9.9991
3° 39'	8.8039	20	8.8048	20	1.1952	9.9991
3° 40'	8.8059	19	8.8067	20	1.1933	9.9991
3° 41'	8.8078	20	8.8087	20	1.1913	9.9991
3° 42'	8.8098	19	8.8107	19	1.1893	9.9991
3° 43'	8.8117	20	8.8126	20	1.1874	9.9991
3° 44'	8.8137	19	8.8146	19	1.1854	9.9991
3° 45'	8.8156	19	8.8165	20	1.1835	9.9991
3° 46'	8.8175	19	8.8185	19	1.1815	9.9991
3° 47'	8.8194	19	8.8204	19	1.1796	9.9991
3° 48'	8.8213	19	8.8223	19	1.1777	9.9990
3° 49'	8.8232	19	8.8242	19	1.1758	9.9990
3° 50'	8.8251	19	8.8261	19	1.1739	9.9990
3° 51'	8.8270	19	8.8280	19	1.1720	9.9990
3° 52'	8.8289	18	8.8299	18	1.1701	9.9990
3° 53'	8.8307	19	8.8317	19	1.1683	9.9990
3° 54'	8.8326	19	8.8336	19	1.1664	9.9990
3° 55'	8.8345	18	8.8355	18	1.1645	9.9990
3° 56'	8.8363	18	8.8373	19	1.1627	9.9990
3° 57'	8.8381	19	8.8392	18	1.1608	9.9990
3° 58'	8.8400	18	8.8410	18	1.1590	9.9990
3° 59'	8.8418	18	8.8428	18	1.1572	9.9990
3° 60'	8.8436	18	8.8446	18	1.1554	9.9989
	log cos	diff. 1'	log cot	com. diff. 1'	log tan	log sin
86°						
						Angle

TABLE II. LOGARITHMIC SINES

4°							
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos	
4° 0'	8.8436		8.8446		1.1554	9.9989	85° 60'
4° 1'	8.8454	18	8.8465	19	1.1535	9.9989	85° 59'
4° 2'	8.8472	18	8.8483	18	1.1517	9.9989	85° 58'
4° 3'	8.8490	18	8.8501	17	1.1499	9.9989	85° 57'
4° 4'	8.8508	18	8.8518	18	1.1482	9.9989	85° 56'
4° 5'	8.8525	17	8.8536	18	1.1464	9.9989	85° 55'
4° 6'	8.8543	18	8.8554	18	1.1446	9.9989	85° 54'
4° 7'	8.8560	17	8.8572	18	1.1428	9.9989	85° 53'
4° 8'	8.8578	18	8.8589	17	1.1411	9.9989	85° 52'
4° 9'	8.8595	17	8.8607	18	1.1393	9.9989	85° 51'
4° 10'	8.8613	18	8.8624	17	1.1376	9.9989	85° 50'
4° 11'	8.8630	17	8.8642	18	1.1358	9.9988	85° 49'
4° 12'	8.8647	17	8.8659	17	1.1341	9.9988	85° 48'
4° 13'	8.8665	18	8.8676	17	1.1324	9.9988	85° 47'
4° 14'	8.8682	17	8.8694	18	1.1306	9.9988	85° 46'
4° 15'	8.8699	17	8.8711	17	1.1289	9.9988	85° 45'
4° 16'	8.8716	17	8.8728	17	1.1272	9.9988	85° 44'
4° 17'	8.8733	17	8.8745	17	1.1255	9.9988	85° 43'
4° 18'	8.8749	16	8.8762	17	1.1238	9.9988	85° 42'
4° 19'	8.8766	17	8.8778	16	1.1222	9.9988	85° 41'
4° 20'	8.8783	16	8.8795	17	1.1205	9.9988	85° 40'
4° 21'	8.8799	17	8.8812	17	1.1188	9.9987	85° 39'
4° 22'	8.8816	17	8.8829	17	1.1171	9.9987	85° 38'
4° 23'	8.8833	17	8.8845	16	1.1155	9.9987	85° 37'
4° 24'	8.8849	16	8.8862	17	1.1138	9.9987	85° 36'
4° 25'	8.8865	16	8.8878	16	1.1122	9.9987	85° 35'
4° 26'	8.8882	17	8.8895	17	1.1105	9.9987	85° 34'
4° 27'	8.8898	16	8.8911	16	1.1089	9.9987	85° 33'
4° 28'	8.8914	16	8.8927	16	1.1073	9.9987	85° 32'
4° 29'	8.8930	16	8.8944	17	1.1056	9.9987	85° 31'
4° 30'	8.8946	16	8.8960	16	1.1040	9.9987	85° 30'
4° 31'	8.8962	16	8.8976	16	1.1024	9.9986	85° 29'
4° 32'	8.8978	16	8.8992	16	1.1008	9.9986	85° 28'
4° 33'	8.8994	16	8.9008	16	1.0992	9.9986	85° 27'
4° 34'	8.9010	16	8.9024	16	1.0976	9.9986	85° 26'
4° 35'	8.9026	16	8.9040	16	1.0960	9.9986	85° 25'
4° 36'	8.9042	16	8.9056	16	1.0944	9.9986	85° 24'
4° 37'	8.9057	15	8.9071	15	1.0929	9.9986	85° 23'
4° 38'	8.9073	16	8.9087	16	1.0913	9.9986	85° 22'
4° 39'	8.9089	16	8.9103	15	1.0897	9.9986	85° 21'
4° 40'	8.9104	15	8.9118	16	1.0882	9.9986	85° 20'
4° 41'	8.9119	16	8.9134	16	1.0866	9.9985	85° 19'
4° 42'	8.9135	16	8.9150	16	1.0850	9.9985	85° 18'
4° 43'	8.9150	15	8.9165	15	1.0835	9.9985	85° 17'
4° 44'	8.9166	16	8.9180	15	1.0820	9.9985	85° 16'
4° 45'	8.9181	15	8.9196	16	1.0804	9.9985	85° 15'
4° 46'	8.9196	15	8.9211	15	1.0789	9.9985	85° 14'
4° 47'	8.9211	15	8.9226	15	1.0774	9.9985	85° 13'
4° 48'	8.9226	15	8.9241	15	1.0759	9.9985	85° 12'
4° 49'	8.9241	15	8.9256	15	1.0744	9.9985	85° 11'
4° 50'	8.9256	15	8.9272	16	1.0728	9.9985	85° 10'
4° 51'	8.9271	15	8.9287	15	1.0713	9.9984	85° 9'
4° 52'	8.9286	15	8.9302	15	1.0698	9.9984	85° 8'
4° 53'	8.9301	14	8.9316	14	1.0684	9.9984	85° 7'
4° 54'	8.9315	15	8.9331	15	1.0669	9.9984	85° 6'
4° 55'	8.9330	15	8.9346	15	1.0654	9.9984	85° 5'
4° 56'	8.9345	15	8.9361	15	1.0639	9.9984	85° 4'
4° 57'	8.9359	14	8.9376	15	1.0624	9.9984	85° 3'
4° 58'	8.9374	15	8.9390	14	1.0610	9.9984	85° 2'
4° 59'	8.9388	15	8.9405	15	1.0595	9.9984	85° 1'
4° 60'	8.9403	15	8.9420	15	1.0580	9.9983	85° 0'
	log cos	diff. 1'	log cot	com. diff. 1'	log tan	log sin	Angle

85°

5°-15°							
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos	diff. 1'
5° 0'	8.9403		8.9420		1.0580	9.9983	
5° 10'	8.9545	14.2	8.9563	14.3	1.0437	9.9982	.1
5° 20'	8.9682	13.7	8.9701	13.8	1.0299	9.9981	.1
5° 30'	8.9816	13.4	8.9836	13.5	1.0164	9.9980	.1
5° 40'	8.9945	12.9	8.9966	13.0	1.0034	9.9979	.1
5° 50'	9.0070	12.5	9.0093	12.7	0.9907	9.9977	.2
6° 0'	9.0192	12.2	9.0216	12.3	0.9784	9.9976	.1
6° 10'	9.0311	11.9	9.0336	12.0	0.9664	9.9975	.1
6° 20'	9.0426	11.5	9.0453	11.7	0.9547	9.9973	.2
6° 30'	9.0539	11.3	9.0567	11.4	0.9433	9.9972	.1
6° 40'	9.0648	10.9	9.0678	11.1	0.9322	9.9971	.1
6° 50'	9.0755	10.7	9.0786	10.8	0.9214	9.9969	.2
7° 0'	9.0859	10.4	9.0891	10.5	0.9109	9.9968	.1
7° 10'	9.0961	10.2	9.0995	10.4	0.9005	9.9966	.2
7° 20'	9.1060	9.9	9.1096	10.1	0.8904	9.9964	.2
7° 30'	9.1157	9.7	9.1194	9.8	0.8806	9.9963	.1
7° 40'	9.1252	9.5	9.1291	9.7	0.8709	9.9961	.2
7° 50'	9.1345	9.3	9.1385	9.4	0.8615	9.9959	.2
8° 0'	9.1436	9.1	9.1478	9.3	0.8522	9.9958	.1
8° 10'	9.1525	8.9	9.1569	9.1	0.8431	9.9956	.2
8° 20'	9.1612	8.7	9.1658	8.9	0.8342	9.9954	.2
8° 30'	9.1697	8.5	9.1745	8.7	0.8255	9.9952	.2
8° 40'	9.1781	8.4	9.1831	8.6	0.8169	9.9950	.2
8° 50'	9.1863	8.2	9.1915	8.4	0.8085	9.9948	.2
9° 0'	9.1943	8.0	9.1997	8.2	0.8003	9.9946	.2
9° 10'	9.2022	7.9	9.2078	8.1	0.7922	9.9944	.2
9° 20'	9.2100	7.8	9.2158	8.0	0.7842	9.9942	.2
9° 30'	9.2176	7.6	9.2236	7.8	0.7764	9.9940	.2
9° 40'	9.2251	7.5	9.2313	7.7	0.7687	9.9938	.2
9° 50'	9.2324	7.3	9.2389	7.6	0.7611	9.9936	.2
10° 0'	9.2397	7.3	9.2463	7.4	0.7537	9.9934	.2
10° 10'	9.2468	7.1	9.2536	7.3	0.7464	9.9931	.3
10° 20'	9.2538	7.0	9.2609	7.3	0.7391	9.9929	.2
10° 30'	9.2606	6.8	9.2680	7.1	0.7320	9.9927	.2
10° 40'	9.2674	6.8	9.2750	7.0	0.7250	9.9924	.3
10° 50'	9.2740	6.6	9.2819	6.9	0.7181	9.9922	.2
11° 0'	9.2806	6.6	9.2887	6.8	0.7113	9.9919	.3
11° 10'	9.2870	6.4	9.2953	6.6	0.7047	9.9917	.2
11° 20'	9.2934	6.4	9.3020	6.7	0.6980	9.9914	.3
11° 30'	9.2997	6.3	9.3085	6.5	0.6915	9.9912	.2
11° 40'	9.3058	6.1	9.3149	6.4	0.6851	9.9909	.3
11° 50'	9.3119	6.1	9.3212	6.3	0.6788	9.9907	.2
12° 0'	9.3179	6.0	9.3275	6.3	0.6725	9.9904	.3
12° 10'	9.3238	5.9	9.3336	6.1	0.6664	9.9901	.3
12° 20'	9.3296	5.8	9.3397	6.1	0.6603	9.9899	.2
12° 30'	9.3353	5.7	9.3458	6.1	0.6542	9.9896	.3
12° 40'	9.3410	5.7	9.3517	5.9	0.6483	9.9893	.3
12° 50'	9.3466	5.6	9.3576	5.9	0.6424	9.9890	.3
13° 0'	9.3521	5.5	9.3634	5.8	0.6366	9.9887	.3
13° 10'	9.3575	5.4	9.3691	5.7	0.6309	9.9884	.3
13° 20'	9.3629	5.4	9.3748	5.7	0.6252	9.9881	.3
13° 30'	9.3682	5.3	9.3804	5.6	0.6196	9.9878	.3
13° 40'	9.3734	5.2	9.3859	5.5	0.6141	9.9875	.3
13° 50'	9.3786	5.2	9.3914	5.5	0.6086	9.9872	.3
14° 0'	9.3837	5.1	9.3968	5.4	0.6032	9.9869	.3
14° 10'	9.3887	5.0	9.4021	5.3	0.5979	9.9866	.3
14° 20'	9.3937	5.0	9.4074	5.3	0.5926	9.9863	.3
14° 30'	9.3986	4.9	9.4127	5.3	0.5873	9.9859	.4
14° 40'	9.4035	4.9	9.4178	5.1	0.5822	9.9856	.3
14° 50'	9.4083	4.8	9.4230	5.2	0.5770	9.9853	.3
15° 0'	9.4130	4.7	9.4281	5.1	0.5719	9.9849	.4
	log cos	diff. 1'	log cot	com. diff. 1'	log tan	log sin	diff. 1'
75°-85°							
85° 0'							
84° 50'							
84° 40'							
84° 30'							
84° 20'							
84° 10'							
84° 0'							
83° 50'							
83° 40'							
83° 30'							
83° 20'							
83° 10'							
83° 0'							
82° 50'							
82° 40'							
82° 30'							
82° 20'							
82° 10'							
82° 0'							
81° 50'							
81° 40'							
81° 30'							
81° 20'							
81° 10'							
81° 0'							
80° 50'							
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80° 10'							
80° 0'							
79° 50'							
79° 40'							
79° 30'							
79° 20'							
79° 10'							
79° 0'							
78° 50'							
78° 40'							
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78° 0'							
77° 50'							
77° 40'							
77° 30'							
77° 20'							
77° 10'							
77° 0'							
76° 50'							
76° 40'							
76° 30'							
76° 20'							
76° 10'							
76° 0'							
75° 50'							
75° 40'							
75° 30'							
75° 20'							
75° 10'							
75° 0'							

## TABLE II. LOGARITHMIC SINES

15°-25°							
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos	diff. 1'
15° 0'	9.4130		9.4281		0.5719	9.9849	
15° 10'	9.4177	4.7	9.4331	5.0	0.5669	9.9846	.3
15° 20'	9.4223	4.6	9.4381	5.0	0.5619	9.9843	.3
15° 30'	9.4269	4.6	9.4430	4.9	0.5570	9.9839	.4
15° 40'	9.4314	4.5	9.4479	4.9	0.5521	9.9836	.4
15° 50'	9.4359	4.5	9.4527	4.8	0.5473	9.9832	.4
16° 0'	9.4403	4.4	9.4575	4.8	0.5425	9.9828	.4
16° 10'	9.4447	4.4	9.4622	4.7	0.5378	9.9825	.3
16° 20'	9.4491	4.4	9.4669	4.7	0.5331	9.9821	.4
16° 30'	9.4533	4.2	9.4716	4.7	0.5284	9.9817	.4
16° 40'	9.4576	4.3	9.4762	4.6	0.5238	9.9814	.3
16° 50'	9.4618	4.2	9.4808	4.6	0.5192	9.9810	.4
17° 0'	9.4659	4.1	9.4853	4.5	0.5147	9.9806	.4
17° 10'	9.4700	4.1	9.4898	4.5	0.5102	9.9802	.4
17° 20'	9.4741	4.1	9.4943	4.5	0.5057	9.9798	.4
17° 30'	9.4781	4.0	9.4987	4.4	0.5013	9.9794	.4
17° 40'	9.4821	4.0	9.5031	4.4	0.4969	9.9790	.4
17° 50'	9.4861	4.0	9.5075	4.4	0.4925	9.9786	.4
18° 0'	9.4900	3.9	9.5118	4.3	0.4882	9.9782	.4
18° 10'	9.4939	3.9	9.5161	4.3	0.4839	9.9778	.4
18° 20'	9.4977	3.8	9.5203	4.2	0.4797	9.9774	.4
18° 30'	9.5015	3.8	9.5245	4.2	0.4755	9.9770	.4
18° 40'	9.5052	3.7	9.5287	4.2	0.4713	9.9765	.5
18° 50'	9.5090	3.8	9.5329	4.2	0.4671	9.9761	.4
19° 0'	9.5126	3.6	9.5370	4.1	0.4630	9.9757	.4
19° 10'	9.5163	3.7	9.5411	4.1	0.4589	9.9752	.5
19° 20'	9.5199	3.6	9.5451	4.0	0.4549	9.9748	.4
19° 30'	9.5235	3.6	9.5491	4.0	0.4509	9.9743	.5
19° 40'	9.5270	3.5	9.5531	4.0	0.4469	9.9739	.4
19° 50'	9.5306	3.6	9.5571	4.0	0.4429	9.9734	.5
20° 0'	9.5341	3.5	9.5611	4.0	0.4389	9.9730	.4
20° 10'	9.5375	3.4	9.5650	3.9	0.4350	9.9725	.5
20° 20'	9.5409	3.4	9.5689	3.9	0.4311	9.9721	.4
20° 30'	9.5443	3.4	9.5727	3.8	0.4273	9.9716	.5
20° 40'	9.5477	3.4	9.5766	3.9	0.4234	9.9711	.5
20° 50'	9.5510	3.3	9.5804	3.8	0.4196	9.9706	.5
21° 0'	9.5543	3.3	9.5842	3.8	0.4158	9.9702	.4
21° 10'	9.5576	3.3	9.5879	3.7	0.4121	9.9697	.5
21° 20'	9.5609	3.3	9.5917	3.8	0.4083	9.9692	.5
21° 30'	9.5641	3.2	9.5954	3.7	0.4046	9.9687	.5
21° 40'	9.5673	3.2	9.5991	3.7	0.4009	9.9682	.5
21° 50'	9.5704	3.1	9.6028	3.7	0.3972	9.9677	.5
22° 0'	9.5736	3.2	9.6064	3.6	0.3936	9.9672	.5
22° 10'	9.5767	3.1	9.6100	3.6	0.3900	9.9667	.5
22° 20'	9.5798	3.1	9.6136	3.6	0.3864	9.9661	.6
22° 30'	9.5828	3.0	9.6172	3.6	0.3828	9.9656	.5
22° 40'	9.5859	3.1	9.6208	3.6	0.3792	9.9651	.5
22° 50'	9.5889	3.0	9.6243	3.5	0.3757	9.9646	.5
23° 0'	9.5919	3.0	9.6279	3.6	0.3721	9.9640	.6
23° 10'	9.5948	2.9	9.6314	3.5	0.3686	9.9635	.5
23° 20'	9.5978	3.0	9.6348	3.4	0.3652	9.9629	.6
23° 30'	9.6007	2.9	9.6383	3.5	0.3617	9.9624	.5
23° 40'	9.6036	2.9	9.6417	3.4	0.3583	9.9618	.6
23° 50'	9.6065	2.9	9.6452	3.5	0.3548	9.9613	.5
24° 0'	9.6093	2.8	9.6486	3.4	0.3514	9.9607	.6
24° 10'	9.6121	2.8	9.6520	3.4	0.3480	9.9602	.5
24° 20'	9.6149	2.8	9.6553	3.3	0.3447	9.9596	.6
24° 30'	9.6177	2.8	9.6587	3.4	0.3413	9.9590	.6
24° 40'	9.6205	2.8	9.6620	3.3	0.3380	9.9584	.6
24° 50'	9.6232	2.7	9.6654	3.4	0.3346	9.9579	.5
25° 0'	9.6259	2.7	9.6687	3.3	0.3313	9.9573	.6
	log cos	diff. 1'	log cot	com. diff. 1'	log tan	log sin	diff. 1'

65°-75°	
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25°-35°							
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos	diff. 1'
25° 0'	9.6259		9.6687		0.3313	9.9573	
25° 10'	9.6286	2.7	9.6720	3.3	0.3280	9.9567	.6
25° 20'	9.6313	2.7	9.6752	3.2	0.3248	9.9561	.6
25° 30'	9.6340	2.7	9.6785	3.3	0.3215	9.9555	.6
25° 40'	9.6366	2.6	9.6817	3.2	0.3183	9.9549	.6
25° 50'	9.6392	2.6	9.6850	3.3	0.3150	9.9543	.6
26° 0'	9.6418	2.6	9.6882	3.2	0.3118	9.9537	.6
26° 10'	9.6444	2.6	9.6914	3.2	0.3086	9.9530	.7
26° 20'	9.6470	2.6	9.6946	3.2	0.3054	9.9524	.6
26° 30'	9.6495	2.5	9.6977	3.1	0.3023	9.9518	.6
26° 40'	9.6521	2.6	9.7009	3.2	0.2991	9.9512	.6
26° 50'	9.6546	2.5	9.7040	3.1	0.2960	9.9505	.7
27° 0'	9.6570	2.4	9.7072	3.2	0.2928	9.9499	.6
27° 10'	9.6595	2.5	9.7103	3.1	0.2897	9.9492	.7
27° 20'	9.6620	2.5	9.7134	3.1	0.2866	9.9486	.6
27° 30'	9.6644	2.4	9.7165	3.1	0.2835	9.9479	.7
27° 40'	9.6668	2.4	9.7196	3.1	0.2804	9.9473	.6
27° 50'	9.6692	2.4	9.7226	3.0	0.2774	9.9466	.7
28° 0'	9.6716	2.4	9.7257	3.1	0.2743	9.9459	.7
28° 10'	9.6740	2.4	9.7287	3.0	0.2713	9.9453	.6
28° 20'	9.6763	2.3	9.7317	3.0	0.2683	9.9446	.7
28° 30'	9.6787	2.4	9.7348	3.1	0.2652	9.9439	.7
28° 40'	9.6810	2.3	9.7378	3.0	0.2622	9.9432	.7
28° 50'	9.6833	2.3	9.7408	3.0	0.2592	9.9425	.7
29° 0'	9.6856	2.3	9.7438	3.0	0.2562	9.9418	.7
29° 10'	9.6878	2.2	9.7467	2.9	0.2533	9.9411	.7
29° 20'	9.6901	2.3	9.7497	3.0	0.2503	9.9404	.7
29° 30'	9.6923	2.2	9.7526	2.9	0.2474	9.9397	.7
29° 40'	9.6946	2.3	9.7556	3.0	0.2444	9.9390	.7
29° 50'	9.6968	2.2	9.7585	2.9	0.2415	9.9383	.7
30° 0'	9.6990	2.2	9.7614	2.9	0.2386	9.9375	.8
30° 10'	9.7012	2.2	9.7644	2.9	0.2356	9.9368	.7
30° 20'	9.7033	2.1	9.7673	2.9	0.2327	9.9361	.7
30° 30'	9.7055	2.2	9.7701	2.8	0.2299	9.9353	.8
30° 40'	9.7076	2.1	9.7730	2.9	0.2270	9.9346	.7
30° 50'	9.7097	2.1	9.7759	2.9	0.2241	9.9338	.8
31° 0'	9.7118	2.1	9.7788	2.9	0.2212	9.9331	.7
31° 10'	9.7139	2.1	9.7816	2.8	0.2184	9.9323	.8
31° 20'	9.7160	2.1	9.7845	2.9	0.2155	9.9315	.8
31° 30'	9.7181	2.1	9.7873	2.8	0.2127	9.9308	.7
31° 40'	9.7201	2.0	9.7902	2.9	0.2098	9.9300	.8
31° 50'	9.7222	2.1	9.7930	2.8	0.2070	9.9292	.8
32° 0'	9.7242	2.0	9.7958	2.8	0.2042	9.9284	.8
32° 10'	9.7262	2.0	9.7986	2.8	0.2014	9.9276	.8
32° 20'	9.7282	2.0	9.8014	2.8	0.1986	9.9268	.8
32° 30'	9.7302	2.0	9.8042	2.8	0.1958	9.9260	.8
32° 40'	9.7322	2.0	9.8070	2.8	0.1930	9.9252	.8
32° 50'	9.7342	2.0	9.8097	2.7	0.1903	9.9244	.8
33° 0'	9.7361	1.9	9.8125	2.8	0.1875	9.9236	.8
33° 10'	9.7380	1.9	9.8153	2.8	0.1847	9.9228	.8
33° 20'	9.7400	2.0	9.8180	2.7	0.1820	9.9219	.9
33° 30'	9.7419	1.9	9.8208	2.8	0.1792	9.9211	.8
33° 40'	9.7438	1.9	9.8235	2.7	0.1765	9.9203	.8
33° 50'	9.7457	1.9	9.8263	2.8	0.1737	9.9194	.9
34° 0'	9.7476	1.9	9.8290	2.7	0.1710	9.9186	.8
34° 10'	9.7494	1.8	9.8317	2.7	0.1683	9.9177	.9
34° 20'	9.7513	1.9	9.8344	2.7	0.1656	9.9169	.8
34° 30'	9.7531	1.8	9.8371	2.7	0.1629	9.9160	.9
34° 40'	9.7550	1.9	9.8398	2.7	0.1602	9.9151	.9
34° 50'	9.7568	1.8	9.8425	2.7	0.1575	9.9142	.9
35° 0'	9.7586	1.8	9.8452	2.7	0.1548	9.9134	.8
	log cos	diff. 1'	log cot	com. diff. 1'	log tan	log sin	diff. 1'
55°-65°							
							Angle

TABLE II. LOGARITHMIC SINES

35°-45°							
Angle	log sin	diff. 1'	log tan	com. diff. 1'	log cot	log cos	diff. 1'
35° 0'	9.7586		9.8452		0.1548	9.9134	
35° 10'	9.7604	1.8	9.8479	2.7	0.1521	9.9125	.9
35° 20'	9.7622	1.8	9.8506	2.7	0.1494	9.9116	.9
35° 30'	9.7640	1.8	9.8533	2.7	0.1467	9.9107	.9
35° 40'	9.7657	1.7	9.8559	2.6	0.1441	9.9098	.9
35° 50'	9.7675	1.8	9.8586	2.7	0.1414	9.9089	.9
36° 0'	9.7692	1.7	9.8613	2.7	0.1387	9.9080	.9
36° 10'	9.7710	1.8	9.8639	2.6	0.1361	9.9070	1.0
36° 20'	9.7727	1.7	9.8666	2.7	0.1334	9.9061	.9
36° 30'	9.7744	1.7	9.8692	2.6	0.1308	9.9052	.9
36° 40'	9.7761	1.7	9.8718	2.6	0.1282	9.9042	1.0
36° 50'	9.7778	1.7	9.8745	2.7	0.1255	9.9033	.9
37° 0'	9.7795	1.7	9.8771	2.6	0.1229	9.9023	1.0
37° 10'	9.7811	1.6	9.8797	2.6	0.1203	9.9014	.9
37° 20'	9.7828	1.7	9.8824	2.7	0.1176	9.9004	1.0
37° 30'	9.7844	1.6	9.8850	2.6	0.1150	9.8995	.9
37° 40'	9.7861	1.7	9.8876	2.6	0.1124	9.8985	1.0
37° 50'	9.7877	1.6	9.8902	2.6	0.1098	9.8975	1.0
38° 0'	9.7893	1.6	9.8928	2.6	0.1072	9.8965	1.0
38° 10'	9.7910	1.7	9.8954	2.6	0.1046	9.8955	1.0
38° 20'	9.7926	1.6	9.8980	2.6	0.1020	9.8945	1.0
38° 30'	9.7941	1.5	9.9006	2.6	0.0994	9.8935	1.0
38° 40'	9.7957	1.6	9.9032	2.6	0.0968	9.8925	1.0
38° 50'	9.7973	1.6	9.9058	2.6	0.0942	9.8915	1.0
39° 0'	9.7989	1.6	9.9084	2.6	0.0916	9.8905	1.0
39° 10'	9.8004	1.5	9.9110	2.6	0.0890	9.8895	1.0
39° 20'	9.8020	1.6	9.9135	2.5	0.0865	9.8884	1.1
39° 30'	9.8035	1.5	9.9161	2.6	0.0839	9.8874	1.0
39° 40'	9.8050	1.5	9.9187	2.6	0.0813	9.8864	1.0
39° 50'	9.8066	1.6	9.9212	2.5	0.0788	9.8853	1.1
40° 0'	9.8081	1.5	9.9238	2.6	0.0762	9.8843	1.0
40° 10'	9.8096	1.5	9.9264	2.6	0.0736	9.8832	1.1
40° 20'	9.8111	1.5	9.9289	2.5	0.0711	9.8821	1.1
40° 30'	9.8125	1.4	9.9315	2.6	0.0685	9.8810	1.1
40° 40'	9.8140	1.5	9.9341	2.6	0.0659	9.8800	1.0
40° 50'	9.8155	1.5	9.9366	2.5	0.0634	9.8789	1.1
41° 0'	9.8169	1.4	9.9392	2.6	0.0608	9.8778	1.1
41° 10'	9.8184	1.5	9.9417	2.5	0.0583	9.8767	1.1
41° 20'	9.8198	1.4	9.9443	2.6	0.0557	9.8756	1.1
41° 30'	9.8213	1.5	9.9468	2.5	0.0532	9.8745	1.1
41° 40'	9.8227	1.4	9.9494	2.6	0.0506	9.8733	1.2
41° 50'	9.8241	1.4	9.9519	2.5	0.0481	9.8722	1.1
42° 0'	9.8255	1.4	9.9544	2.5	0.0456	9.8711	1.1
42° 10'	9.8269	1.4	9.9570	2.6	0.0430	9.8699	1.2
42° 20'	9.8283	1.4	9.9595	2.5	0.0405	9.8688	1.1
42° 30'	9.8297	1.4	9.9621	2.6	0.0379	9.8676	1.2
42° 40'	9.8311	1.4	9.9646	2.5	0.0354	9.8665	1.1
42° 50'	9.8324	1.3	9.9671	2.5	0.0329	9.8653	1.2
43° 0'	9.8338	1.4	9.9697	2.6	0.0303	9.8641	1.2
43° 10'	9.8351	1.3	9.9722	2.5	0.0278	9.8629	1.2
43° 20'	9.8365	1.4	9.9747	2.5	0.0253	9.8618	1.1
43° 30'	9.8378	1.3	9.9772	2.5	0.0228	9.8606	1.2
43° 40'	9.8391	1.3	9.9798	2.6	0.0202	9.8594	1.2
43° 50'	9.8405	1.4	9.9823	2.5	0.0177	9.8582	1.2
44° 0'	9.8418	1.3	9.9848	2.5	0.0152	9.8569	1.3
44° 10'	9.8431	1.3	9.9874	2.6	0.0126	9.8557	1.2
44° 20'	9.8444	1.3	9.9899	2.5	0.0101	9.8545	1.2
44° 30'	9.8457	1.3	9.9924	2.5	0.0076	9.8532	1.3
44° 40'	9.8469	1.2	9.9949	2.5	0.0051	9.8520	1.2
44° 50'	9.8482	1.3	9.9975	2.6	0.0025	9.8507	1.3
45° 0'	9.8495	1.3	0.0000	2.5	0.0000	9.8495	1.2
	log cos	diff. 1'	log cot	com. diff. 1'	log tan	log sin	diff. 1'
45°-55°							
							Angle
							55° 0'
							54° 50'
							54° 40'
							54° 30'
							54° 20'
							54° 10'
							54° 0'
							53° 50'
							53° 40'
							53° 30'
							53° 20'
							53° 10'
							53° 0'
							52° 50'
							52° 40'
							52° 30'
							52° 20'
							52° 10'
							52° 0'
							51° 50'
							51° 40'
							51° 30'
							51° 20'
							51° 10'
							51° 0'
							50° 50'
							50° 40'
							50° 30'
							50° 20'
							50° 10'
							50° 0'
							49° 50'
							49° 40'
							49° 30'
							49° 20'
							49° 10'
							49° 0'
							48° 50'
							48° 40'
							48° 30'
							48° 20'
							48° 10'
							48° 0'
							47° 50'
							47° 40'
							47° 30'
							47° 20'
							47° 10'
							47° 0'
							46° 50'
							46° 40'
							46° 30'
							46° 20'
							46° 10'
							46° 0'
							45° 50'
							45° 40'
							45° 30'
							45° 20'
							45° 10'
							45° 0'



TO CHANGE FROM MINUTES AND SECONDS INTO THE DECIMAL  
PARTS OF A DEGREE OR INTO RADIANs

From seconds	From minutes	From degrees into radians
1''=0.00028°=0.0000048 Rad.	1'=0.017°=0.00029 Rad.	1°=0.01745 Rad.
2''=0.00056°=0.0000097 "	2'=0.033°=0.00058 "	2°=0.03491 "
3''=0.00083°=0.0000145 "	3'=0.050°=0.00087 "	3°=0.05236 "
4''=0.00111°=0.0000194 "	4'=0.067°=0.00116 "	4°=0.06981 "
5''=0.00139°=0.0000242 "	5'=0.083°=0.00145 "	5°=0.08727 "
6''=0.00167°=0.0000291 "	6'=0.100°=0.00175 "	6°=0.10472 "
7''=0.00194°=0.0000339 "	7'=0.117°=0.00204 "	7°=0.12217 "
8''=0.00222°=0.0000388 "	8'=0.133°=0.00233 "	8°=0.13963 "
9''=0.00250°=0.0000436 "	9'=0.150°=0.00262 "	9°=0.15708 "
10''=0.00278°=0.0000485 "	10'=0.167°=0.00291 "	10°=0.17453 "
20''=0.00556°=0.0000970 "	20'=0.333°=0.00582 "	20°=0.34907 "
30''=0.00833°=0.0001454 "	30'=0.500°=0.00873 "	30°=0.52360 "
40''=0.01111°=0.0001939 "	40'=0.667°=0.01164 "	40°=0.69813 "
50''=0.01389°=0.0002424 "	50'=0.833°=0.01454 "	50°=0.87266 "

TO CHANGE FROM DECIMAL PARTS OF A DEGREE INTO MINUTES  
AND SECONDS

0.0000° = 0.000' = 0"	0.20° = 12.0' = 12'	0.60° = 36.0' = 36'
0.0001° = 0.006' = 0.36"	0.21° = 12.6' = 12' 36"	0.61° = 36.6' = 36' 36"
0.0002° = 0.012' = 0.72"	0.22° = 13.2' = 13' 12"	0.62° = 37.2' = 37' 12"
0.0003° = 0.018' = 1.08"	0.23° = 13.8' = 13' 48"	0.63° = 37.8' = 37' 48"
0.0004° = 0.024' = 1.44"	0.24° = 14.4' = 14' 24"	0.64° = 38.4' = 38' 24"
0.0005° = 0.030' = 1.80"	0.25° = 15.0' = 15'	0.65° = 39.0' = 39'
0.0006° = 0.036' = 2.16"	0.26° = 15.6' = 15' 36"	0.66° = 39.6' = 39' 36"
0.0007° = 0.042' = 2.52"	0.27° = 16.2' = 16' 12"	0.67° = 40.2' = 40' 12"
0.0008° = 0.048' = 2.88"	0.28° = 16.8' = 16' 48"	0.68° = 40.8' = 40' 48"
0.0009° = 0.054' = 3.24"	0.29° = 17.4' = 17' 24"	0.69° = 41.4' = 41' 24"
0.0010° = 0.060' = 3.60"	0.30° = 18.0' = 18'	0.70° = 42.0' = 42'
0.001° = 0.06' = 3.6"	0.31° = 18.6' = 18' 36"	0.71° = 42.6' = 42' 36"
0.002° = 0.12' = 7.2"	0.32° = 19.2' = 19' 12"	0.72° = 43.2' = 43' 12"
0.003° = 0.18' = 10.8"	0.33° = 19.8' = 19' 48"	0.73° = 43.8' = 43' 48"
0.004° = 0.24' = 14.4"	0.34° = 20.4' = 20' 24"	0.74° = 44.4' = 44' 24"
0.005° = 0.30' = 18.0"	0.35° = 21.0' = 21'	0.75° = 45.0' = 45'
0.006° = 0.36' = 21.6"	0.36° = 21.6' = 21' 36"	0.76° = 45.6' = 45' 36"
0.007° = 0.42' = 25.2"	0.37° = 22.2' = 22' 12"	0.77° = 46.2' = 46' 12"
0.008° = 0.48' = 28.8"	0.38° = 22.8' = 22' 48"	0.78° = 46.8' = 46' 48"
0.009° = 0.54' = 32.4"	0.39° = 23.4' = 23' 24"	0.79° = 47.4' = 47' 24"
0.010° = 0.60' = 36.0"	0.40° = 24.0' = 24'	0.80° = 48.0' = 48'
0.01° = 0.6' = 36"	0.41° = 24.6' = 24' 36"	0.81° = 48.6' = 48' 36"
0.02° = 1.2' = 1' 12"	0.42° = 25.2' = 25' 12"	0.82° = 49.2' = 49' 12"
0.03° = 1.8' = 1' 48"	0.43° = 25.8' = 25' 48"	0.83° = 49.8' = 49' 48"
0.04° = 2.4' = 2' 24"	0.44° = 26.4' = 26' 24"	0.84° = 50.4' = 50' 24"
0.05° = 3.0' = 3'	0.45° = 27.0' = 27'	0.85° = 51.0' = 51'
0.06° = 3.6' = 3' 36"	0.46° = 27.6' = 27' 36"	0.86° = 51.6' = 51' 36"
0.07° = 4.2' = 4' 12"	0.47° = 28.2' = 28' 12"	0.87° = 52.2' = 52' 12"
0.08° = 4.8' = 4' 48"	0.48° = 28.8' = 28' 48"	0.88° = 52.8' = 52' 48"
0.09° = 5.4' = 5' 24"	0.49° = 29.4' = 29' 24"	0.89° = 53.4' = 53' 24"
0.10° = 6.0' = 6'	0.50° = 30.0' = 30'	0.90° = 54.0' = 54'
0.11° = 6.6' = 6' 36"	0.51° = 30.6' = 30' 36"	0.91° = 54.6' = 54' 36"
0.12° = 7.2' = 7' 12"	0.52° = 31.2' = 31' 12"	0.92° = 55.2' = 55' 12"
0.13° = 7.8' = 7' 48"	0.53° = 31.8' = 31' 48"	0.93° = 55.8' = 55' 48"
0.14° = 8.4' = 8' 24"	0.54° = 32.4' = 32' 24"	0.94° = 56.4' = 56' 24"
0.15° = 9.0' = 9'	0.55° = 33.0' = 33'	0.95° = 57.0' = 57'
0.16° = 9.6' = 9' 36"	0.56° = 33.6' = 33' 36"	0.96° = 57.6' = 57' 36"
0.17° = 10.2' = 10' 12"	0.57° = 34.2' = 34' 12"	0.97° = 58.2' = 58' 12"
0.18° = 10.8' = 10' 48"	0.58° = 34.8' = 34' 48"	0.98° = 58.8' = 58' 48"
0.19° = 11.4' = 11' 24"	0.59° = 35.4' = 35' 24"	0.99° = 59.4' = 59' 24"
0.20° = 12.0' = 12'	0.60° = 36.0' = 36'	1.00° = 60.0' = 60'



TABLE III

FOUR-PLACE LOGARITHMS OF TRIGONOMETRIC  
FUNCTIONS, THE ANGLE BEING EXPRESSED  
IN DEGREES AND THE DECIMAL  
PART OF A DEGREE

This table gives the common logarithms (base 10) of the sines, cosines, tangents, and cotangents of all angles from  $0^\circ$  to  $5^\circ$ , and from  $85^\circ$  to  $90^\circ$  for every hundredth part of a degree, and from  $5^\circ$  to  $85^\circ$  for every tenth of a degree, all calculated to four places of decimals. In order to avoid the printing of negative characteristics, the number 10 has been added to every logarithm in the first, second, and fourth columns (those having **log sin**, **log tan**, and **log cos** at the top). Hence in writing down any logarithm taken from these three columns — 10 should be written after it. Logarithms taken from the third column (having **log cot** at the top) should be used as printed.

A logarithm found from this table by interpolation may be in error by one unit in the last decimal place, except for angles between  $0^\circ$  and  $0.3^\circ$  or between  $89.7^\circ$  and  $90^\circ$ , when the error may be larger. In the latter cases the table refers the student to the formulas on page 6 for more accurate results.

TABLE III. LOGARITHMIC SINES

0°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	Prop. Parts						
0.00°	—	Ordinary interpolation here will in general give inaccurate results. Instead use formulas on p. 6.	—	Ordinary interpolation here will in general give inaccurate results. Instead use formulas on p. 6.	—	10.0000	89.00°						
0.01°	6.2419		6.2419		3.7581	10.0000	89.99°	Extra digit	Difference				
0.02°	6.5429		6.5429		3.4571	10.0000	89.98°		79	78	77		
0.03°	6.7190		6.7190		3.2810	10.0000	89.97°		1 7.9	7.8	7.7		
0.04°	6.8439		6.8439		3.1561	10.0000	89.96°		2 15.8	15.6	15.4		
0.05°	6.9408		6.9408		3.0592	10.0000	89.95°		3 23.7	23.4	23.1		
0.06°	7.0200		7.0200		2.9800	10.0000	89.94°		4 31.6	31.2	30.8		
0.07°	7.0870		7.0870		2.9130	10.0000	89.93°		5 39.5	39.0	38.5		
0.08°	7.1450		7.1450		2.8550	10.0000	89.92°		6 47.4	46.8	46.2		
0.09°	7.1961		7.1961		2.8039	10.0000	89.91°		7 55.3	54.6	53.9		
0.10°	7.2419		7.2419		2.7581	10.0000	89.90°		8 63.2	62.4	61.6		
0.11°	7.2833		7.2833		2.7167	10.0000	89.89°	9 71.1	70.2	69.3			
0.12°	7.3211		7.3211		2.6789	10.0000	89.88°	1 76	75	74			
0.13°	7.3558		7.3558		2.6442	10.0000	89.87°	2 7.6	7.5	7.4			
0.14°	7.3880		7.3880		2.6120	10.0000	89.86°	3 15.2	15.0	14.8			
0.15°	7.4180		7.4180		2.5820	10.0000	89.85°	4 22.8	22.5	22.2			
0.16°	7.4460		7.4460		2.5540	10.0000	89.84°	5 30.4	30.0	29.6			
0.17°	7.4723		7.4723		2.5277	10.0000	89.83°	6 38.0	37.5	37.0			
0.18°	7.4971		7.4971		2.5028°	10.0000	89.82°	7 45.6	45.0	44.4			
0.19°	7.5206		7.5206		2.4794	10.0000	89.81°	8 53.2	52.5	51.8			
0.20°	7.5429		7.5429		2.4571	10.0000	89.80°	9 60.8	60.0	59.2			
0.21°	7.5641		7.5641		2.4359	10.0000	89.79°	1 68.4	67.5	66.6			
0.22°	7.5843		7.5843		2.4157	10.0000	89.78°	2 73	72	71			
0.23°	7.6036		7.6036		2.3964	10.0000	89.77°	3 14.6	14.4	14.2			
0.24°	7.6221		7.6221		2.3779	10.0000	89.76°	4 21.9	21.6	21.3			
0.25°	7.6398		7.6398		2.3602	10.0000	89.75°	5 29.2	28.8	28.4			
0.26°	7.6568		7.6568		2.3431	10.0000	89.74°	6 36.5	36.0	35.5			
0.27°	7.6732		7.6732		2.3268	10.0000	89.73°	7 43.8	43.2	42.6			
0.28°	7.6890		7.6890		2.3110	10.0000	89.72°	8 51.1	50.4	49.7			
0.29°	7.7043		7.7043		2.2957	10.0000	89.71°	9 58.4	57.6	56.8			
0.30°	7.7190		7.7190		2.2810	10.0000	89.70°	1 65.7	64.8	63.9			
0.31°	7.7332	142	7.7332	142	2.2668	10.0000	69	68	67				
0.32°	7.7470	138	7.7470	138	2.2530	10.0000	2 13.8	13.6	13.4				
0.33°	7.7604	134	7.7604	134	2.2396	10.0000	3 20.7	20.4	20.1				
0.34°	7.7734	130	7.7734	130	2.2266	10.0000	4 27.6	27.2	26.8				
0.35°	7.7859	125	7.7859	125	2.2140	10.0000	5 34.5	34.0	33.5				
0.36°	7.7982	123	7.7982	122	2.2018	10.0000	6 41.4	40.8	40.2				
0.37°	7.8101	119	7.8101	119	2.1899	10.0000	7 48.3	47.6	46.9				
0.38°	7.8217	116	7.8217	116	2.1783	10.0000	8 55.2	54.4	53.6				
0.39°	7.8329	112	7.8329	112	2.1671	10.0000	9 62.1	61.2	60.3				
0.40°	7.8439	110	7.8439	110	2.1561	10.0000	1 69	68	67				
0.41°	7.8547	108	7.8547	108	2.1453	10.0000	2 13.8	13.6	13.4				
0.42°	7.8651	104	7.8651	104	2.1349	10.0000	3 20.7	20.4	20.1				
0.43°	7.8753	102	7.8754	103	2.1246	10.0000	4 27.6	27.2	26.8				
0.44°	7.8853	100	7.8853	99	2.1147	10.0000	5 34.5	34.0	33.5				
0.45°	7.8951	98	7.8951	98	2.1049	10.0000	6 41.4	40.8	40.2				
0.46°	7.9046	95	7.9046	94	2.0954	10.0000	7 48.3	47.6	46.9				
0.47°	7.9140	94	7.9140	91	2.0860	10.0000	8 55.2	54.4	53.6				
0.48°	7.9231	91	7.9231	91	2.0769	10.0000	9 62.1	61.2	60.3				
0.49°	7.9321	90	7.9321	90	2.0678	10.0000	1 69	68	67				
0.50°	7.9408	87	7.9409	88	2.0591	10.0000	2 13.8	13.6	13.4				
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle	63	62	61			
								1 6.3	6.2	6.1			
								2 12.6	12.4	12.2			
								3 18.9	18.6	18.3			
								4 25.2	24.8	24.4			
								5 31.5	31.0	30.5			
								6 37.8	37.2	36.6			
								7 44.1	43.4	42.7			
								8 50.4	49.6	48.8			
								9 56.7	55.8	54.9			

89°

0°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos		Prop. Parts			
0.50°	7.9408		7.9409		2.0591	10.0000	89.50°	Extra digit	Difference		
0.51°	7.9494	86	7.9495	86	2.0505	10.0000	89.49°				
0.52°	7.9579	85	7.9579	84	2.0421	10.0000	89.48°				
0.53°	7.9661	82	7.9662	83	2.0338	10.0000	89.47°				
0.54°	7.9743		7.9743		2.0257	10.0000	89.46°				
0.55°	7.9822	79	7.9823	80	2.0177	10.0000	89.45°				
0.56°	7.9901	79	7.9901	78	2.0099	10.0000	89.44°				
0.57°	7.9977	76	7.9978	77	2.0022	10.0000	89.43°				
0.58°	8.0053	74	8.0053	74	1.9947	10.0000	89.42°				
0.59°	8.0127	73	8.0127	73	1.9873	10.0000	89.41°				
0.60°	8.0200		8.0200		1.9800	10.0000	89.40°	1	60	59	58
0.61°	8.0272	72	8.0272	72	1.9728	10.0000	89.39°	2	6.0	5.9	5.8
0.62°	8.0343	71	8.0343	71	1.9657	10.0000	89.38°	3	12.0	11.8	11.6
0.63°	8.0412	68	8.0412	69	1.9588	10.0000	89.37°	4	18.0	17.7	17.4
0.64°	8.0480	68	8.0481	67	1.9519	10.0000	89.36°	5	24.0	23.6	23.2
0.65°	8.0548	66	8.0548	66	1.9452	10.0000	89.35°	6	30.0	29.5	29.0
0.66°	8.0614	65	8.0614	66	1.9386	10.0000	89.34°	7	36.0	35.4	34.8
0.67°	8.0679	65	8.0680	64	1.9320	10.0000	89.33°	8	42.0	41.3	40.6
0.68°	8.0744	63	8.0744	63	1.9256	10.0000	89.32°	9	48.0	47.2	46.4
0.69°	8.0807	63	8.0807	63	1.9193	10.0000	89.31°	1	54.0	53.1	52.2
0.70°	8.0870	61	8.0870	62	1.9130	10.0000	89.30°	2	57	56	55
0.71°	8.0931	61	8.0932	60	1.9068	10.0000	89.29°	3	5.7	5.6	5.5
0.72°	8.0992	60	8.0992	60	1.9008	10.0000	89.28°	4	11.4	11.2	11.0
0.73°	8.1052	59	8.1052	59	1.8948	10.0000	89.27°	5	17.1	16.8	16.5
0.74°	8.1111	58	8.1111	59	1.8889	10.0000	89.26°	6	22.8	22.4	22.0
0.75°	8.1169	58	8.1170	57	1.8830	10.0000	89.25°	7	28.5	28.0	27.5
0.76°	8.1227	57	8.1227	57	1.8773	10.0000	89.24°	8	34.2	33.6	33.0
0.77°	8.1284	56	8.1284	56	1.8716	10.0000	89.23°	9	39.9	39.2	38.5
0.78°	8.1340	55	8.1340	55	1.8660	10.0000	89.22°	1	45.6	44.8	44.0
0.79°	8.1395	55	8.1395	55	1.8605	10.0000	89.21°	2	51.3	50.4	49.5
0.80°	8.1450	53	8.1450	54	1.8550	10.0000	89.20°	3	54	53	52
0.81°	8.1503	54	8.1504	53	1.8496	10.0000	89.19°	4	5.4	5.3	5.2
0.82°	8.1557	52	8.1557	53	1.8443	10.0000	89.18°	5	10.8	10.6	10.4
0.83°	8.1609	52	8.1610	52	1.8390	10.0000	89.17°	6	16.2	15.9	15.6
0.84°	8.1661	52	8.1662	51	1.8338	10.0000	89.16°	7	21.6	21.2	20.8
0.85°	8.1713	51	8.1713	51	1.8287	10.0000	89.15°	8	27.0	26.5	26.0
0.86°	8.1764	50	8.1764	50	1.8236	10.0000	89.14°	9	32.4	31.8	31.2
0.87°	8.1814	49	8.1814	50	1.8186	9.9999	89.13°	1	37.8	37.1	36.4
0.88°	8.1863	49	8.1864	49	1.8136	9.9999	89.12°	2	43.2	42.4	41.6
0.89°	8.1912	48	8.1913	49	1.8087	9.9999	89.11°	3	48.6	47.7	46.8
0.90°	8.1961	48	8.1962	48	1.8038	9.9999	89.10°	4	54.0	53.1	52.2
0.91°	8.2009	47	8.2010	47	1.7990	9.9999	89.09°	5	5.1	5.0	4.9
0.92°	8.2056	47	8.2057	47	1.7943	9.9999	89.08°	6	10.2	10.0	9.8
0.93°	8.2103	47	8.2104	46	1.7896	9.9999	89.07°	7	15.3	15.0	14.7
0.94°	8.2150	46	8.2150	46	1.7850	9.9999	89.06°	8	20.4	20.0	19.6
0.95°	8.2196	45	8.2196	46	1.7804	9.9999	89.05°	9	25.5	25.0	24.5
0.96°	8.2241	45	8.2242	45	1.7758	9.9999	89.04°	1	30.6	30.0	29.4
0.97°	8.2286	45	8.2287	44	1.7713	9.9999	89.03°	2	35.7	35.0	34.3
0.98°	8.2331	44	8.2331	45	1.7669	9.9999	89.02°	3	40.8	40.0	39.2
0.99°	8.2375	44	8.2376	43	1.7624	9.9999	89.01°	4	45.9	45.0	44.1
1.00°	8.2419		8.2419		1.7581	9.9999	89.00°	5	48	47	46
								6	4.8	4.7	4.6
								7	9.6	9.4	9.2
								8	14.4	14.1	13.8
								9	19.2	18.8	18.4
								1	24.0	23.5	23.0
								2	28.8	28.2	27.6
								3	33.6	32.9	32.2
								4	38.4	37.6	36.8
								5	43.2	42.3	41.4
								6			
								7	45	44	43
								8	4.5	4.4	4.3
								9	9.0	8.8	8.6
								1	13.5	13.2	12.9
								2	18.0	17.6	17.2
								3	22.5	22.0	21.5
								4	27.0	26.4	25.8
								5	31.5	30.8	30.1
								6	36.0	35.2	34.4
								7	40.5	39.6	38.7
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle				

89°

1°										
Angle	log sin	diff.	log tan	com. diff.	log cot	log cos		Prop. Parts		
1.00°	8.2419		8.2419		1.7581	9.9999	89.00°	Extra digit	Difference	
1.01°	8.2462	43	8.2462	43	1.7538	9.9999	88.99°			
1.02°	8.2505	43	8.2505	43	1.7495	9.9999	88.98°			
1.03°	8.2547	42	8.2548	42	1.7452	9.9999	88.97°			
1.04°	8.2589		8.2590		1.7410	9.9999	88.96°			
1.05°	8.2630	41	8.2631	41	1.7369	9.9999	88.95°			
1.06°	8.2672	42	8.2672	41	1.7328	9.9999	88.94°			
1.07°	8.2712		8.2713		1.7287	9.9999	88.93°			
1.08°	8.2753	41	8.2754	41	1.7246	9.9999	88.92°			
1.09°	8.2793	40	8.2794	40	1.7206	9.9999	88.91°			
1.10°	8.2832	39	8.2833	39	1.7167	9.9999	88.90°	1	43	42
1.11°	8.2872	40	8.2873	40	1.7127	9.9999	88.89°	2	4.3	4.2
1.12°	8.2911	39	8.2912	39	1.7088	9.9999	88.88°	3	8.6	8.4
1.13°	8.2949	38	8.2950	38	1.7050	9.9999	88.87°	4	12.9	12.6
		39		39				5	17.2	16.8
1.14°	8.2988		8.2988		1.7012	9.9999	88.86°	6	21.5	21.0
1.15°	8.3025	37	8.3026	37	1.6974	9.9999	88.85°	7	25.8	25.2
1.16°	8.3063	38	8.3064	38	1.6936	9.9999	88.84°	8	30.1	29.4
1.17°	8.3100	37	8.3101	37	1.6899	9.9999	88.83°	9	34.4	33.6
1.18°	8.3137	36	8.3138	36	1.6862	9.9999	88.82°	8	38.7	37.8
1.19°	8.3174	37	8.3175	37	1.6825	9.9999	88.81°	7		
1.20°	8.3210	36	8.3211	36	1.6789	9.9999	88.80°	6	41	40
1.21°	8.3246	35	8.3247	35	1.6753	9.9999	88.79°	1	4.1	4.0
1.22°	8.3282	36	8.3283	36	1.6717	9.9999	88.78°	2	8.2	8.0
1.23°	8.3317	35	8.3318	35	1.6682	9.9999	88.77°	3	12.3	12.0
		36		36				4	16.4	16.0
1.24°	8.3353	34	8.3354	34	1.6646	9.9999	88.76°	5	20.5	20.0
1.25°	8.3388	35	8.3389	35	1.6611	9.9999	88.75°	6	24.6	24.0
1.26°	8.3422	34	8.3423	34	1.6577	9.9999	88.74°	7	28.7	28.0
1.27°	8.3456	33	8.3458	33	1.6542	9.9999	88.73°	8	32.8	32.0
1.28°	8.3491	34	8.3492	34	1.6508	9.9999	88.72°	9	36.9	36.0
1.29°	8.3524	33	8.3525	33	1.6475	9.9999	88.71°	1	39	38
1.30°	8.3558	32	8.3559	32	1.6441	9.9999	88.70°	2	3.9	3.8
1.31°	8.3591	33	8.3592	33	1.6408	9.9999	88.69°	3	7.8	7.6
1.32°	8.3624	32	8.3625	32	1.6375	9.9999	88.68°	4	11.7	11.4
1.33°	8.3657	31	8.3658	31	1.6342	9.9999	88.67°	5	15.6	15.2
1.34°	8.3689	32	8.3691	32	1.6309	9.9999	88.66°	6	19.5	19.0
1.35°	8.3722	31	8.3723	31	1.6277	9.9999	88.65°	7	23.4	22.8
1.36°	8.3754	30	8.3755	30	1.6245	9.9999	88.64°	8	27.3	26.6
		31		31				9	31.2	30.4
1.37°	8.3786	30	8.3787	30	1.6213	9.9999	88.63°	1	35.1	34.2
1.38°	8.3817	29	8.3818	29	1.6182	9.9999	88.62°	2	37	36
1.39°	8.3848	30	8.3850	30	1.6150	9.9999	88.61°	3	3.7	3.6
1.40°	8.3880	29	8.3881	29	1.6119	9.9999	88.60°	4	7.4	7.2
1.41°	8.3911	30	8.3912	30	1.6088	9.9999	88.59°	5	11.1	10.8
1.42°	8.3941	29	8.3943	29	1.6057	9.9999	88.58°	6	14.8	14.4
1.43°	8.3972	30	8.3973	30	1.6027	9.9999	88.57°	7	18.5	18.0
		31		31				8	22.2	21.6
1.44°	8.4002	29	8.4003	29	1.5997	9.9999	88.56°	9	25.9	25.2
1.45°	8.4032	28	8.4033	28	1.5967	9.9999	88.55°	8	29.6	28.8
1.46°	8.4062	29	8.4063	29	1.5937	9.9999	88.54°	7	33.3	32.4
1.47°	8.4091	30	8.4093	30	1.5907	9.9999	88.53°	1	34	33
1.48°	8.4121	29	8.4122	29	1.5878	9.9999	88.52°	2	3.4	3.3
1.49°	8.4150	28	8.4152	28	1.5848	9.9999	88.51°	3	6.8	6.6
1.50°	8.4179	29	8.4181	29	1.5819	9.9999	88.50°	4	10.2	9.8
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle	5	13.6	13.2
								6	17.0	16.5
								7	20.4	19.8
								8	23.8	23.1
								9	27.2	26.4
								8	30.6	29.7
								1	31	30
								2	3.1	3.0
								3	6.2	6.0
								4	9.3	9.0
								5	12.4	12.0
								6	15.5	15.0
								7	18.6	18.0
								8	21.7	21.0
								9	24.8	24.0
								8	27.9	27.0

88°

1°							
Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	Prop. Parts
1.50°	8.4179		8.4181		1.5819	9.9999	88.50°
1.51°	8.4208	29	8.4210	29	1.5790	9.9998	88.49°
1.52°	8.4237	29	8.4238	28	1.5762	9.9998	88.48°
1.53°	8.4265	28	8.4267	29	1.5733	9.9998	88.47°
		28		28			
1.54 <sup>a</sup>	8.4293		8.4295		1.5705	9.9998	88.46°
1.55°	8.4322	29	8.4323	28	1.5677	9.9998	88.45°
1.56°	8.4349	27	8.4351	28	1.5649	9.9998	88.44°
		28		28			
1.57°	8.4377	28	8.4379	27	1.5621	9.9998	88.43°
1.58°	8.4405	27	8.4406	28	1.5594	9.9998	88.42°
1.59°	8.4432	27	8.4434	27	1.5566	9.9998	88.41°
1.60°	8.4459		8.4461		1.5539	9.9998	88.40°
1.61°	8.4486	27	8.4488	27	1.5512	9.9998	88.39°
1.62°	8.4513	27	8.4515	27	1.5485	9.9998	88.38°
1.63°	8.4540	27	8.4542	26	1.5458	9.9998	88.37°
		27		26			
1.64°	8.4567		8.4568		1.5432	9.9998	88.36°
1.65°	8.4593	26	8.4595	27	1.5405	9.9998	88.35°
1.66°	8.4619	26	8.4621	26	1.5379	9.9998	88.34°
		26		26			
1.67°	8.4645		8.4647		1.5353	9.9998	88.33°
1.68°	8.4671	26	8.4673	26	1.5327	9.9998	88.32°
1.69°	8.4697	26	8.4699	26	1.5301	9.9998	88.31°
1.70°	8.4723		8.4725		1.5275	9.9998	88.30°
1.71°	8.4748	25	8.4750	25	1.5250	9.9998	88.29°
1.72°	8.4773	25	8.4775	25	1.5225	9.9998	88.28°
1.73°	8.4799	26	8.4801	25	1.5199	9.9998	88.27°
		25		25			
1.74°	8.4824		8.4826		1.5174	9.9998	88.26°
1.75°	8.4848	24	8.4851	25	1.5149	9.9998	88.25°
1.76°	8.4873	25	8.4875	24	1.5125	9.9998	88.24°
		25		25			
1.77°	8.4898		8.4900		1.5100	9.9998	88.23°
1.78°	8.4922	24	8.4924	24	1.5076	9.9998	88.22°
1.79°	8.4947	25	8.4949	25	1.5051	9.9998	88.21°
1.80°	8.4971	24	8.4973	24	1.5027	9.9998	88.20°
1.81°	8.4995	24	8.4997	24	1.5003	9.9998	88.19°
1.82°	8.5019	24	8.5021	24	1.4979	9.9998	88.18°
1.83°	8.5043	23	8.5045	23	1.4955	9.9998	88.17°
		23		23			
1.84°	8.5066		8.5068		1.4932	9.9998	88.16°
1.85°	8.5090	24	8.5092	24	1.4908	9.9998	88.15°
1.86°	8.5113	23	8.5115	24	1.4885	9.9998	88.14°
		23		24			
1.87°	8.5136		8.5139		1.4861	9.9998	88.13°
1.88°	8.5160	24	8.5162	23	1.4838	9.9998	88.12°
1.89°	8.5183	23	8.5185	23	1.4815	9.9998	88.11°
		23		23			
1.90°	8.5206		8.5208		1.4792	9.9998	88.10°
1.91°	8.5228	22	8.5231	23	1.4769	9.9998	88.09°
1.92°	8.5251	23	8.5253	23	1.4747	9.9998	88.08°
1.93°	8.5274	22	8.5276	22	1.4724	9.9998	88.07°
		22		22			
1.94°	8.5296		8.5298		1.4702	9.9998	88.06°
1.95°	8.5318	22	8.5321	23	1.4679	9.9997	88.05°
1.96°	8.5340	23	8.5343	22	1.4657	9.9997	88.04°
		23		22			
1.97°	8.5363		8.5365		1.4635	9.9997	88.03°
1.98°	8.5385	22	8.5387	22	1.4613	9.9997	88.02°
1.99°	8.5406	21	8.5409	22	1.4591	9.9997	88.01°
2.00°	8.5428		8.5431		1.4569	9.9997	88.00°
		22		22			
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle

88°

### TABLE III. LOGARITHMIC SINES

2°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos		Prop. Parts	
2.00°	8.5428		8.5431		1.4569	9.9997	88.00°	Extra digit	Difference
2.01°	8.5450	22	8.5453	22	1.4547	9.9997	87.99°		
2.02°	8.5471	21	8.5474	21	1.4526	9.9997	87.98°		
2.03°	8.5493	22	8.5496	22	1.4504	9.9997	87.97°		
2.04°	8.5514	21	8.5517	21	1.4483	9.9997	87.96°		
2.05°	8.5535	22	8.5538	22	1.4462	9.9997	87.95°	22	
2.06°	8.5557	21	8.5559	21	1.4441	9.9997	87.94°		
2.07°	8.5578		8.5580		1.4420	9.9997	87.93°		
2.08°	8.5598	20	8.5601	20	1.4399	9.9997	87.92°		
2.09°	8.5619	21	8.5622	21	1.4378	9.9997	87.91°		
2.10°	8.5640	21	8.5643	21	1.4357	9.9997	87.90°	1	2.2
2.11°	8.5661	20	8.5664	20	1.4336	9.9997	87.89°	2	4.4
2.12°	8.5681	21	8.5684	21	1.4316	9.9997	87.88°	3	6.6
2.13°	8.5702	20	8.5705	20	1.4295	9.9997	87.87°	4	8.8
2.14°	8.5722		8.5725		1.4275	9.9997	87.86°	5	11.0
2.15°	8.5742	20	8.5745	20	1.4255	9.9997	87.85°	6	13.2
2.16°	8.5762	20	8.5765	20	1.4235	9.9997	87.84°	7	15.4
2.17°	8.5782		8.5785		1.4215	9.9997	87.83°	8	17.6
2.18°	8.5802	20	8.5805	20	1.4195	9.9997	87.82°	9	19.8
2.19°	8.5822	20	8.5825	20	1.4175	9.9997	87.81°		
2.20°	8.5842	20	8.5845	20	1.4155	9.9997	87.80°	1	2.1
2.21°	8.5862	19	8.5865	19	1.4135	9.9997	87.79°	2	4.2
2.22°	8.5881	20	8.5884	20	1.4116	9.9997	87.78°	3	6.3
2.23°	8.5901	19	8.5904	19	1.4096	9.9997	87.77°	4	8.4
2.24°	8.5920		8.5923		1.4077	9.9997	87.76°	5	10.5
2.25°	8.5939	20	8.5943	19	1.4057	9.9997	87.75°	6	12.6
2.26°	8.5959	19	8.5962	19	1.4038	9.9997	87.74°	7	14.7
2.27°	8.5978		8.5981		1.4019	9.9997	87.73°	8	16.8
2.28°	8.5997	19	8.6000	19	1.4000	9.9997	87.72°	9	18.9
2.29°	8.6016	19	8.6019	19	1.3981	9.9997	87.71°		
2.30°	8.6035	19	8.6038	19	1.3962	9.9996	87.70°	1	1.9
2.31°	8.6054	18	8.6057	19	1.3943	9.9996	87.69°	2	3.8
2.32°	8.6072	19	8.6076	19	1.3924	9.9996	87.68°	3	5.7
2.33°	8.6091	19	8.6095	18	1.3905	9.9996	87.67°	4	7.6
2.34°	8.6110		8.6113		1.3887	9.9996	87.66°	5	9.5
2.35°	8.6128	18	8.6132	19	1.3868	9.9996	87.65°	6	11.4
2.36°	8.6147	18	8.6150	18	1.3850	9.9996	87.64°	7	13.3
2.37°	8.6165		8.6169		1.3831	9.9996	87.63°	8	15.2
2.38°	8.6183	18	8.6187	18	1.3813	9.9996	87.62°	9	17.1
2.39°	8.6201	19	8.6205	18	1.3795	9.9996	87.61°		
2.40°	8.6220	18	8.6223	19	1.3777	9.9996	87.60°	1	1.9
2.41°	8.6238	18	8.6242	18	1.3758	9.9996	87.59°	2	3.8
2.42°	8.6256	18	8.6260	17	1.3740	9.9996	87.58°	3	5.7
2.43°	8.6274	17	8.6277	18	1.3723	9.9996	87.57°	4	7.2
2.44°	8.6291		8.6295		1.3705	9.9996	87.56°	5	9.0
2.45°	8.6309	18	8.6313	18	1.3687	9.9996	87.55°	6	10.8
2.46°	8.6327	17	8.6331	17	1.3669	9.9996	87.54°	7	12.6
2.47°	8.6344		8.6348		1.3652	9.9996	87.53°	8	14.4
2.48°	8.6362	18	8.6366	18	1.3634	9.9996	87.52°	9	16.2
2.49°	8.6379	17	8.6384	18	1.3616	9.9996	87.51°		
2.50°	8.6397	18	8.6401	17	1.3599	9.9996	87.50°	1	1.7
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle	2	3.4
								3	5.1
								4	6.8
								5	8.5
								6	10.2
								7	11.9
								8	13.6
								9	15.3

87°



2°									
Angle	log sin	diff.	log tan	com. diff.	log cot	log cos		Prop. Parts	
2.50°	8.6397		8.6401		1.3599	9.9996	87.50°	Extra digit	Difference
2.51°	8.6414	17	8.6418	17	1.3582	9.9996	87.49°		
2.52°	8.6431	17	8.6436	18	1.3564	9.9996	87.48°		
2.53°	8.6449	18	8.6453	17	1.3547	9.9996	87.47°		
2.54°	8.6466		8.6470		1.3530	9.9996	87.46°		
2.55°	8.6483	17	8.6487	17	1.3513	9.9996	87.45°		
2.56°	8.6500	17	8.6504	17	1.3496	9.9996	87.44°		
2.57°	8.6517	17	8.6521	17	1.3479	9.9996	87.43°		
2.58°	8.6534	17	8.6538	17	1.3462	9.9996	87.42°		
2.59°	8.6550	16	8.6555	17	1.3445	9.9996	87.41°		
2.60°	8.6567	17	8.6571	16	1.3429	9.9996	87.40°	1	18
2.61°	8.6584	17	8.6588	17	1.3412	9.9995	87.39°	2	1.8
2.62°	8.6600	16	8.6605	17	1.3395	9.9995	87.38°	3	3.6
2.63°	8.6617	17	8.6621	16	1.3379	9.9995	87.37°	4	5.4
2.64°	8.6633	16	8.6638	17	1.3362	9.9995	87.36°	5	7.2
2.65°	8.6650	16	8.6654	16	1.3346	9.9995	87.35°	6	9.0
2.66°	8.6666	16	8.6671	16	1.3329	9.9995	87.34°	7	10.8
2.67°	8.6682		8.6687		1.3313	9.9995	87.33°	8	12.6
2.68°	8.6699	17	8.6703	16	1.3297	9.9995	87.32°	9	14.4
2.69°	8.6715	16	8.6719	16	1.3281	9.9995	87.31°		16.2
2.70°	8.6731	16	8.6736	17	1.3264	9.9995	87.30°	1	17
2.71°	8.6747	16	8.6752	16	1.3248	9.9995	87.29°		
2.72°	8.6763	16	8.6768	16	1.3232	9.9995	87.28°		
2.73°	8.6779	16	8.6784	16	1.3216	9.9995	87.27°		
2.74°	8.6795	15	8.6800	15	1.3200	9.9995	87.26°		
2.75°	8.6810	16	8.6815	16	1.3185	9.9995	87.25°		
2.76°	8.6826	16	8.6831	16	1.3169	9.9995	87.24°		
2.77°	8.6842	16	8.6847	16	1.3153	9.9995	87.23°		
2.78°	8.6858	15	8.6863	15	1.3137	9.9995	87.22°		
2.79°	8.6873	16	8.6878	16	1.3122	9.9995	87.21°	2	1.7
2.80°	8.6889	15	8.6894	15	1.3106	9.9995	87.20°	3	3.4
2.81°	8.6904	16	8.6909	16	1.3091	9.9995	87.19°	4	5.1
2.82°	8.6920	15	8.6925	15	1.3075	9.9995	87.18°	5	6.8
2.83°	8.6935	15	8.6940	16	1.3060	9.9995	87.17°	6	8.5
2.84°	8.6950	15	8.6956	15	1.3044	9.9995	87.16°	7	10.2
2.85°	8.6965	16	8.6971	15	1.3029	9.9995	87.15°	8	11.9
2.86°	8.6981	15	8.6986	15	1.3014	9.9995	87.14°	9	13.6
2.87°	8.6996	15	8.7001	15	1.2999	9.9995	87.13°		15.3
2.88°	8.7011	15	8.7016	15	1.2984	9.9995	87.12°	1	16
2.89°	8.7026	15	8.7031	15	1.2969	9.9994	87.11°		
2.90°	8.7041	15	8.7046	15	1.2954	9.9994	87.10°		
2.91°	8.7056	15	8.7061	15	1.2939	9.9994	87.09°		
2.92°	8.7071	15	8.7076	15	1.2924	9.9994	87.08°		
2.93°	8.7086	14	8.7091	15	1.2909	9.9994	87.07°		
2.94°	8.7100	15	8.7106	15	1.2894	9.9994	87.06°		
2.95°	8.7115	15	8.7121	15	1.2879	9.9994	87.05°		
2.96°	8.7130	14	8.7136	14	1.2864	9.9994	87.04°		
2.97°	8.7144	15	8.7150	15	1.2850	9.9994	87.03°	2	1.6
2.98°	8.7159	15	8.7165	15	1.2835	9.9994	87.02°	3	3.2
2.99°	8.7174	15	8.7179	14	1.2821	9.9994	87.01°	4	4.8
3.00°	8.7188	14	8.7194	15	1.2806	9.9994	87.00°	5	6.4
								6	8.0
								7	9.6
								8	11.2
								9	12.8
									14.4
								1	15
								2	1.5
								3	3.0
								4	4.5
								5	6.0
								6	7.5
								7	9.0
								8	10.5
								9	12.0
									13.5
								1	14
								2	1.4
								3	2.8
								4	4.2
								5	5.6
								6	7.0
								7	8.4
								8	9.8
								9	11.2
									12.6
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle		

87°

3°							
Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	Prop. Parts
3.00°	8.7188		8.7194		1.2806	9.9994	87.00°
3.01°	8.7202	14	8.7208	14	1.2792	9.9994	<div>Extra digit</div> <div>Difference</div> <div>15</div> <div>1 1.5 2 3.0 3 4.5 4 6.0 5 7.5 6 9.0 7 10.5 8 12.0 9 13.5</div>
3.02°	8.7217	15	8.7223	15	1.2777	9.9994	
3.03°	8.7231	14	8.7237	14	1.2763	9.9994	
3.04°	8.7245	15	8.7252	14	1.2748	9.9994	
3.05°	8.7260	14	8.7266	14	1.2734	9.9994	
3.06°	8.7274	14	8.7280	14	1.2720	9.9994	86.99°
3.07°	8.7288		8.7294		1.2706	9.9994	86.98°
3.08°	8.7302	14	8.7308	14	1.2692	9.9994	86.97°
3.09°	8.7316	14	8.7323	15	1.2677	9.9994	86.96°
3.10°	8.7330	14	8.7337	14	1.2663	9.9994	86.95°
3.11°	8.7344	14	8.7351	14	1.2649	9.9994	86.94°
3.12°	8.7358	14	8.7365	14	1.2635	9.9994	86.93°
3.13°	8.7372	14	8.7379	14	1.2621	9.9994	86.92°
3.14°	8.7386	14	8.7392	13	1.2608	9.9993	86.91°
3.15°	8.7400	13	8.7406	14	1.2594	9.9993	86.87°
3.16°	8.7413	14	8.7420	14	1.2580	9.9993	86.86°
3.17°	8.7427	14	8.7434	14	1.2566	9.9993	86.85°
3.18°	8.7441	13	8.7448	14	1.2552	9.9993	86.84°
3.19°	8.7454	14	8.7461	13	1.2539	9.9993	86.83°
3.20°	8.7468	14	8.7475	14	1.2525	9.9993	86.82°
3.21°	8.7482	13	8.7488	13	1.2512	9.9993	86.81°
3.22°	8.7495	13	8.7502	14	1.2498	9.9993	86.80°
3.23°	8.7508	13	8.7515	13	1.2485	9.9993	86.79°
3.24°	8.7522	14	8.7529	14	1.2471	9.9993	86.78°
3.25°	8.7535	13	8.7542	13	1.2458	9.9993	86.77°
3.26°	8.7549	14	8.7556	14	1.2444	9.9993	86.76°
3.27°	8.7562	13	8.7569	13	1.2431	9.9993	86.75°
3.28°	8.7575	13	8.7582	13	1.2418	9.9993	86.74°
3.29°	8.7588	13	8.7596	14	1.2404	9.9993	86.73°
3.30°	8.7602	14	8.7609	13	1.2391	9.9993	86.72°
3.31°	8.7615	13	8.7622	13	1.2378	9.9993	86.71°
3.32°	8.7628	13	8.7635	13	1.2365	9.9993	86.70°
3.33°	8.7641	13	8.7648	13	1.2352	9.9993	86.69°
3.34°	8.7654	13	8.7661	13	1.2339	9.9993	86.68°
3.35°	8.7667	13	8.7674	13	1.2326	9.9993	86.67°
3.36°	8.7680	13	8.7687	13	1.2313	9.9993	86.66°
3.37°	8.7693	12	8.7700	13	1.2300	9.9992	86.65°
3.38°	8.7705	13	8.7713	13	1.2287	9.9992	86.64°
3.39°	8.7718	13	8.7726	13	1.2274	9.9992	86.63°
3.40°	8.7731	13	8.7739	12	1.2261	9.9992	86.62°
3.41°	8.7744	12	8.7751	13	1.2249	9.9992	86.61°
3.42°	8.7756	12	8.7764	13	1.2236	9.9992	86.60°
3.43°	8.7769	13	8.7777	13	1.2223	9.9992	86.59°
3.44°	8.7782	13	8.7790	13	1.2210	9.9992	86.58°
3.45°	8.7794	12	8.7802	12	1.2198	9.9992	86.57°
3.46°	8.7807	13	8.7815	13	1.2185	9.9992	86.56°
3.47°	8.7819	12	8.7827	12	1.2173	9.9992	86.55°
3.48°	8.7832	13	8.7840	13	1.2160	9.9992	86.54°
3.49°	8.7844	12	8.7852	12	1.2148	9.9992	86.53°
3.50°	8.7857	13	8.7865	13	1.2135	9.9992	86.52°
							86.51°
							86.50°
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle

86°

3°							
Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	Prop. Parts
<b>3.50°</b>	8.7857		8.7865		1.2135	9.9992	<b>86.50°</b>
3.51°	8.7869	12	8.7877	12	1.2123	9.9992	86.49°
3.52°	8.7881	12	8.7890	13	1.2110	9.9992	86.48°
3.53°	8.7894	13	8.7902	12	1.2098	9.9992	86.47°
		12		12			
3.54°	8.7906		8.7914		1.2086	9.9992	86.46°
3.55°	8.7918	12	8.7927	13	1.2073	9.9992	86.45°
3.56°	8.7930	12	8.7939	12	1.2061	9.9992	86.44°
		13		12			
3.57°	8.7943		8.7951		1.2049	9.9992	86.43°
3.58°	8.7955	12	8.7963	12	1.2037	9.9992	86.42°
3.59°	8.7967	12	8.7975	12	1.2025	9.9991	86.41°
		12		13			
<b>3.60°</b>	8.7979		8.7988		1.2012	9.9991	<b>86.40°</b>
		12		12			
3.61°	8.7991		8.8000		1.2000	9.9991	86.39°
3.62°	8.8003	12	8.8012	12	1.1988	9.9991	86.38°
3.63°	8.8015	12	8.8024	12	1.1976	9.9991	86.37°
		12		12			
3.64°	8.8027		8.8036		1.1964	9.9991	86.36°
3.65°	8.8039	12	8.8048	12	1.1952	9.9991	86.35°
3.66°	8.8051	12	8.8059	11	1.1941	9.9991	86.34°
		11		12			
3.67°	8.8062		8.8071		1.1929	9.9991	86.33°
3.68°	8.8074	12	8.8083	12	1.1917	9.9991	86.32°
3.69°	8.8086	12	8.8095	12	1.1905	9.9991	86.31°
		12		12			
<b>3.70°</b>	8.8098		8.8107		1.1893	9.9991	<b>86.30°</b>
		11		12			
3.71°	8.8109		8.8119		1.1881	9.9991	86.29°
3.72°	8.8121	12	8.8130	11	1.1870	9.9991	86.28°
3.73°	8.8133	12	8.8142	12	1.1858	9.9991	86.27°
		11		12			
3.74°	8.8144		8.8154		1.1846	9.9991	86.26°
3.75°	8.8156	12	8.8165	11	1.1835	9.9991	86.25°
3.76°	8.8168	12	8.8177	12	1.1823	9.9991	86.24°
		11		11			
3.77°	8.8179		8.8188		1.1812	9.9991	86.23°
3.78°	8.8191	12	8.8200	12	1.1800	9.9991	86.22°
3.79°	8.8202	11	8.8212	12	1.1788	9.9990	86.21°
		11		11			
<b>3.80°</b>	8.8213		8.8223		1.1777	9.9990	<b>86.20°</b>
		12		11			
3.81°	8.8225		8.8234		1.1766	9.9990	86.19°
3.82°	8.8236	11	8.8246	12	1.1754	9.9990	86.18°
3.83°	8.8248	12	8.8257	11	1.1743	9.9990	86.17°
		11		12			
3.84°	8.8259		8.8269		1.1731	9.9990	86.16°
3.85°	8.8270	11	8.8280	11	1.1720	9.9990	86.15°
3.86°	8.8281	11	8.8291	11	1.1709	9.9990	86.14°
		12		11			
3.87°	8.8293		8.8302		1.1698	9.9990	86.13°
3.88°	8.8304	11	8.8314	12	1.1686	9.9990	86.12°
3.89°	8.8315	11	8.8325	11	1.1675	9.9990	86.11°
		11		11			
<b>3.90°</b>	8.8326		8.8336		1.1664	9.9990	<b>86.10°</b>
		11		11			
3.91°	8.8337		8.8347		1.1653	9.9990	86.09°
3.92°	8.8348	11	8.8358	11	1.1642	9.9990	86.08°
3.93°	8.8359	11	8.8370	12	1.1630	9.9990	86.07°
		11		11			
3.94°	8.8370		8.8381		1.1619	9.9990	86.06°
3.95°	8.8381	11	8.8392	11	1.1608	9.9990	86.05°
3.96°	8.8392	11	8.8403	11	1.1597	9.9990	86.04°
		11		11			
3.97°	8.8403		8.8414		1.1586	9.9990	86.03°
3.98°	8.8414	11	8.8425	11	1.1575	9.9990	86.02°
3.99°	8.8425	11	8.8436	11	1.1564	9.9989	86.01°
		11		10			
<b>4.00°</b>	8.8436		8.8446		1.1554	9.9989	<b>86.00°</b>
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle

TABLE III. LOGARITHMIC SINES

4°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos		Prop. Parts	
								Extra digit	Difference
4.00°	8.8436	11	8.8446	11	1.1554	9.9989	86.00°		
4.01°	8.8447	10	8.8457	11	1.1543	9.9989	85.99°		
4.02°	8.8457	11	8.8468	11	1.1532	9.9989	85.98°		
4.03°	8.8468	11	8.8479	11	1.1521	9.9989	85.97°		
4.04°	8.8479	11	8.8490	11	1.1510	9.9989	85.96°		
4.05°	8.8490	10	8.8501	11	1.1499	9.9989	85.95°		
4.06°	8.8500	11	8.8511	10	1.1489	9.9989	85.94°		
4.07°	8.8511	11	8.8522	11	1.1478	9.9989	85.93°		
4.08°	8.8522	10	8.8533	10	1.1467	9.9989	85.92°		
4.09°	8.8532	11	8.8543	11	1.1457	9.9989	85.91°		
4.10°	8.8543	10	8.8554	11	1.1446	9.9989	85.90°		
4.11°	8.8553	11	8.8565	10	1.1435	9.9989	85.89°		
4.12°	8.8564	11	8.8575	11	1.1425	9.9989	85.88°		
4.13°	8.8575	10	8.8586	10	1.1414	9.9989	85.87°		
4.14°	8.8585	10	8.8596	11	1.1404	9.9989	85.86°		
4.15°	8.8595	11	8.8607	10	1.1393	9.9989	85.85°		
4.16°	8.8606	10	8.8617	11	1.1383	9.9989	85.84°		
4.17°	8.8616	11	8.8628	10	1.1372	9.9988	85.83°		
4.18°	8.8627	10	8.8638	11	1.1362	9.9988	85.82°		
4.19°	8.8637	10	8.8649	10	1.1351	9.9988	85.81°		
4.20°	8.8647	11	8.8659	10	1.1341	9.9988	85.80°		
4.21°	8.8658	10	8.8669	11	1.1331	9.9988	85.79°		
4.22°	8.8668	10	8.8680	10	1.1320	9.9988	85.78°		
4.23°	8.8678	10	8.8690	10	1.1310	9.9988	85.77°		
4.24°	8.8688	11	8.8700	11	1.1300	9.9988	85.76°		
4.25°	8.8699	10	8.8711	10	1.1289	9.9988	85.75°		
4.26°	8.8709	10	8.8721	10	1.1279	9.9988	85.74°		
4.27°	8.8719	10	8.8731	10	1.1269	9.9988	85.73°		
4.28°	8.8729	10	8.8741	10	1.1259	9.9988	85.72°		
4.29°	8.8739	10	8.8751	11	1.1249	9.9988	85.71°		
4.30°	8.8749	10	8.8762	10	1.1238	9.9988	85.70°		
4.31°	8.8759	10	8.8772	10	1.1228	9.9988	85.69°		
4.32°	8.8769	11	8.8782	10	1.1218	9.9988	85.68°		
4.33°	8.8780	10	8.8792	10	1.1208	9.9988	85.67°		
4.34°	8.8790	9	8.8802	10	1.1198	9.9988	85.66°		
4.35°	8.8799	10	8.8812	10	1.1188	9.9987	85.65°		
4.36°	8.8809	10	8.8822	10	1.1178	9.9987	85.64°		
4.37°	8.8819	10	8.8832	10	1.1168	9.9987	85.63°		
4.38°	8.8829	10	8.8842	10	1.1158	9.9987	85.62°		
4.39°	8.8839	10	8.8852	10	1.1148	9.9987	85.61°		
4.40°	8.8849	10	8.8862	10	1.1138	9.9987	85.60°		
4.41°	8.8859	10	8.8872	10	1.1128	9.9987	85.59°		
4.42°	8.8869	9	8.8882	9	1.1118	9.9987	85.58°		
4.43°	8.8878	10	8.8891	10	1.1109	9.9987	85.57°		
4.44°	8.8888	10	8.8901	10	1.1099	9.9987	85.56°		
4.45°	8.8898	10	8.8911	10	1.1089	9.9987	85.55°		
4.46°	8.8908	9	8.8921	10	1.1079	9.9987	85.54°		
4.47°	8.8917	10	8.8931	9	1.1069	9.9987	85.53°		
4.48°	8.8927	10	8.8940	10	1.1060	9.9987	85.52°		
4.49°	8.8937	10	8.8950	10	1.1050	9.9987	85.51°		
4.50°	8.8946	9	8.8960	10	1.1040	9.9987	85.50°		
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle		

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4°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos		Prop. Parts	
4.50°	8.8946		8.8960		1.1040	9.9987	85.50°		
4.51°	8.8956	10	8.8970	10	1.1030	9.9987	85.49°	Extra digit	Difference
4.52°	8.8966	10	8.8979	9	1.1021	9.9986	85.48°		
4.53°	8.8975	9	8.8989	9	1.1011	9.9986	85.47°		
4.54°	8.8985	9	8.8998	10	1.1002	9.9986	85.46°		
4.55°	8.8994	10	8.9008	10	1.0992	9.9986	85.45°		
4.56°	8.9004	9	8.9018	9	1.0982	9.9986	85.44°		
4.57°	8.9013		8.9027		1.0973	9.9986	85.43°		
4.58°	8.9023	10	8.9037	10	1.0963	9.9986	85.42°		
4.59°	8.9032	9	8.9046	9	1.0954	9.9986	85.41°		
4.60°	8.9042	10	8.9056	10	1.0944	9.9986	85.40°		
4.61°	8.9051	9	8.9065	9	1.0935	9.9986	85.39°	1	1.0
4.62°	8.9060	9	8.9075	10	1.0925	9.9986	85.38°	2	2.0
4.63°	8.9070	10	8.9084	9	1.0916	9.9986	85.37°	3	3.0
4.64°	8.9079	9	8.9093	9	1.0907	9.9986	85.36°	4	4.0
4.65°	8.9089	10	8.9103	10	1.0897	9.9986	85.35°	5	5.0
4.66°	8.9098	9	8.9112	9	1.0888	9.9986	85.34°	6	6.0
4.67°	8.9107	9	8.9122	10	1.0878	9.9986	85.33°	7	7.0
4.68°	8.9116	10	8.9131	9	1.0869	9.9985	85.32°	8	8.0
4.69°	8.9126	9	8.9140	9	1.0860	9.9985	85.31°	9	9.0
4.70°	8.9135	10	8.9150	10	1.0850	9.9985	85.30°		
4.71°	8.9144	9	8.9159	9	1.0841	9.9985	85.29°		
4.72°	8.9153	9	8.9168	9	1.0832	9.9985	85.28°		
4.73°	8.9162	10	8.9177	9	1.0823	9.9985	85.27°	1	0.9
4.74°	8.9172	9	8.9186	10	1.0814	9.9985	85.26°	2	1.8
4.75°	8.9181	9	8.9196	9	1.0804	9.9985	85.25°	3	2.7
4.76°	8.9190	9	8.9205	9	1.0795	9.9985	85.24°	4	3.6
4.77°	8.9199	9	8.9214	9	1.0786	9.9985	85.23°	5	4.5
4.78°	8.9208	9	8.9223	9	1.0777	9.9985	85.22°	6	5.4
4.79°	8.9217	9	8.9232	9	1.0768	9.9985	85.21°	7	6.3
4.80°	8.9226	9	8.9241	9	1.0759	9.9985	85.20°	8	7.2
4.81°	8.9235	9	8.9250	10	1.0750	9.9985	85.19°	9	8.1
4.82°	8.9244	9	8.9260	9	1.0740	9.9985	85.18°		
4.83°	8.9253	9	8.9269	9	1.0731	9.9985	85.17°		
4.84°	8.9262	9	8.9278	9	1.0722	9.9984	85.16°		
4.85°	8.9271	9	8.9287	9	1.0713	9.9984	85.15°		
4.86°	8.9280	9	8.9296	9	1.0704	9.9984	85.14°		
4.87°	8.9289	9	8.9305	8	1.0695	9.9984	85.13°		
4.88°	8.9298	9	8.9313	9	1.0687	9.9984	85.12°		
4.89°	8.9307	8	8.9322	9	1.0678	9.9984	85.11°		
4.90°	8.9315	9	8.9331	9	1.0669	9.9984	85.10°	1	0.8
4.91°	8.9324	9	8.9340	9	1.0660	9.9984	85.09°	2	1.6
4.92°	8.9333	9	8.9349	9	1.0651	9.9984	85.08°	3	2.4
4.93°	8.9342	9	8.9358	9	1.0642	9.9984	85.07°	4	3.2
4.94°	8.9351	8	8.9367	9	1.0633	9.9984	85.06°	5	4.0
4.95°	8.9359	9	8.9376	8	1.0624	9.9984	85.05°	6	4.8
4.96°	8.9368	9	8.9384	9	1.0616	9.9984	85.04°	7	5.6
4.97°	8.9377	9	8.9393	9	1.0607	9.9984	85.03°	8	6.4
4.98°	8.9386	8	8.9402	9	1.0598	9.9984	85.02°	9	7.2
4.99°	8.9394	9	8.9411	9	1.0589	9.9984	85.01°		
5.00°	8.9403		8.9420		1.0580	9.9983	85.00°		
	log cos	diff.	log cot	com. diff.	log tan	log sin	Angle		

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### TABLE III. LOGARITHMIC SINES

# 5°-10°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	diff.	Prop. Parts				
								Extra digit	Difference			
5.0°	8.9403		8.9420		1.0580	9.9983		85.0°				
5.1°	8.9489	86	8.9506	86	1.0494	9.9983	0	84.9°				
5.2°	8.9573	84	8.9591	85	1.0409	9.9982	1	84.8°				
5.3°	8.9655	82	8.9674	83	1.0326	9.9981	1	84.7°				
		81		82			0					
5.4°	8.9736		8.9756		1.0244	9.9981		84.6°				
5.5°	8.9816	80	8.9836	80	1.0164	9.9980	1	84.5°				
5.6°	8.9894	78	8.9915	79	1.0085	9.9979	1	84.4°				
		76		77			1					
5.7°	8.9970		8.9992		1.0008	9.9978		84.3°				
5.8°	9.0046	76	9.0068	76	0.9932	9.9978	0	84.2°				
5.9°	9.0120	74	9.0143	75	0.9857	9.9977	1	84.1°				
		72		73			1					
6.0°	9.0192		9.0216		0.9784	9.9976		84.0°				
		70		71			1					
6.1°	9.0264	72	9.0289	72	0.9711	9.9975	0	83.9°				
6.2°	9.0334	70	9.0360	70	0.9640	9.9975	1	83.8°				
6.3°	9.0403	69	9.0430	71	0.9570	9.9974	1	83.7°				
		68		69			1					
6.4°	9.0472		9.0499		0.9501	9.9973		83.6°				
6.5°	9.0539	67	9.0567	68	0.9433	9.9972	1	83.5°				
6.6°	9.0605	66	9.0633	66	0.9367	9.9971	1	83.4°				
		65		66			1					
6.7°	9.0670		9.0699		0.9301	9.9970		83.3°				
6.8°	9.0734	64	9.0764	65	0.9236	9.9969	1	83.2°				
6.9°	9.0797	63	9.0828	64	0.9172	9.9968	1	83.1°				
		62		63			0					
7.0°	9.0859	61	9.0891	63	0.9109	9.9968	1	83.0°				
		60		60			1					
7.1°	9.0920		9.0954		0.9046	9.9967		82.9°				
7.2°	9.0981	61	9.1015	61	0.8985	9.9966	1	82.8°				
7.3°	9.1040	59	9.1076	59	0.8924	9.9965	1	82.7°				
		58		59			1					
7.4°	9.1099		9.1135		0.8865	9.9964		82.6°				
7.5°	9.1157	58	9.1194	59	0.8806	9.9963	1	82.5°				
7.6°	9.1214	57	9.1252	58	0.8748	9.9962	1	82.4°				
		56		57			1					
7.7°	9.1271		9.1310		0.8690	9.9961		82.3°				
7.8°	9.1326	55	9.1367	56	0.8633	9.9960	1	82.2°				
7.9°	9.1381	55	9.1423	55	0.8577	9.9959	1	82.1°				
		54		55			1					
8.0°	9.1436		9.1478		0.8522	9.9958		82.0°				
		53		54			2					
8.1°	9.1489	53	9.1533	53	0.8467	9.9956	1	81.9°				
8.2°	9.1542	52	9.1587	54	0.8413	9.9955	1	81.8°				
8.3°	9.1594	52	9.1640	53	0.8360	9.9954	1	81.7°				
		51		52			1					
8.4°	9.1646		9.1693		0.8307	9.9953		81.6°				
8.5°	9.1697	51	9.1745	52	0.8255	9.9952	1	81.5°				
8.6°	9.1747	50	9.1797	51	0.8203	9.9951	1	81.4°				
		50		51			1					
8.7°	9.1797		9.1848		0.8152	9.9950		81.3°				
8.8°	9.1847	50	9.1898	50	0.8102	9.9949	1	81.2°				
8.9°	9.1895	48	9.1948	50	0.8052	9.9947	2	81.1°				
		48		49			1					
9.0°	9.1943		9.1997		0.8003	9.9946		81.0°				
		48		49			1					
9.1°	9.1991		9.2046		0.7954	9.9945		80.9°				
9.2°	9.2038	47	9.2094	48	0.7906	9.9944	1	80.8°				
9.3°	9.2085	47	9.2142	48	0.7858	9.9943	1	80.7°				
		46		47			2					
9.4°	9.2131		9.2189		0.7811	9.9941		80.6°				
9.5°	9.2176	45	9.2236	47	0.7764	9.9940	1	80.5°				
9.6°	9.2221	45	9.2282	46	0.7718	9.9939	1	80.4°				
		45		46			2					
9.7°	9.2266		9.2328		0.7672	9.9937		80.3°				
9.8°	9.2310	44	9.2374	46	0.7626	9.9936	1	80.2°				
9.9°	9.2353	43	9.2419	45	0.7581	9.9935	1	80.1°				
		44		44			1					
10.0°	9.2397		9.2463		0.7537	9.9934		80.0°				
	log cos	diff.	log cot	com. diff.	log tan	log sin	diff.	Angle				

# 80°-85°

10°-15°													
Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	diff.	Prop. Parts					
10.0°	9.2397		9.2463		0.7537	9.9934		80.0°	Extra digit	Difference			
10.1°	9.2439	42	9.2507	44	0.7493	9.9932	2	79.9°					
10.2°	9.2482	43	9.2551	44	0.7449	9.9931	1	79.8°					
10.3°	9.2524	43	9.2594	43	0.7406	9.9929	2	79.7°					
10.4°	9.2565		9.2637		0.7363	9.9928	1	79.6°					
10.5°	9.2606	41	9.2680	43	0.7320	9.9927	1	79.5°					
10.6°	9.2647	41	9.2722	42	0.7278	9.9925	2	79.4°					
10.7°	9.2687	40	9.2764	42	0.7236	9.9924	1	79.3°	1	2	4.4	4.3	4.2
10.8°	9.2727	40	9.2805	41	0.7195	9.9922	2	79.2°	2	3	8.8	8.6	8.4
10.9°	9.2767	39	9.2846	41	0.7154	9.9921	1	79.1°	3	4	13.2	12.9	12.6
11.0°	9.2806	39	9.2887	40	0.7113	9.9919	2	79.0°	4	5	17.6	17.2	16.8
11.1°	9.2845	38	9.2927	40	0.7073	9.9918	1	78.9°	5	6	22.0	21.5	21.0
11.2°	9.2883	38	9.2967	39	0.7033	9.9916	2	78.8°	6	7	26.4	25.8	25.2
11.3°	9.2921	38	9.3006	39	0.6994	9.9915	1	78.7°	7	8	30.8	30.1	29.4
11.4°	9.2959	38	9.3046	40	0.6954	9.9913	2	78.6°	8	9	35.2	34.5	33.6
11.5°	9.2997	37	9.3085	39	0.6915	9.9912	1	78.5°	9		39.6	38.8	37.8
11.6°	9.3034	36	9.3123	39	0.6877	9.9910	2	78.4°			41	40	39
11.7°	9.3070	37	9.3162	38	0.6838	9.9909	1	78.3°	1	2	4.1	4.0	3.9
11.8°	9.3107	36	9.3200	37	0.6800	9.9907	2	78.2°	2	3	8.2	8.0	7.8
11.9°	9.3143	36	9.3237	37	0.6763	9.9906	1	78.1°	3	4	12.3	12.0	11.7
12.0°	9.3179	35	9.3275	37	0.6725	9.9904	2	78.0°	4	5	16.4	16.0	15.6
12.1°	9.3214	36	9.3312	37	0.6688	9.9902	1	77.9°	5	6	20.5	20.0	19.5
12.2°	9.3250	34	9.3349	36	0.6651	9.9901	2	77.8°	6	7	24.6	24.0	23.4
12.3°	9.3284	35	9.3385	37	0.6615	9.9899	1	77.7°	7	8	28.7	28.0	27.3
12.4°	9.3319	34	9.3422	36	0.6578	9.9897	2	77.6°	8	9	32.8	32.0	31.2
12.5°	9.3353	34	9.3458	35	0.6542	9.9896	1	77.5°	9		36.9	36.0	35.1
12.6°	9.3387	34	9.3493	36	0.6507	9.9894	2	77.4°			38	37	36
12.7°	9.3421	34	9.3529	35	0.6471	9.9892	1	77.3°	1	2	3.8	3.7	3.6
12.8°	9.3455	33	9.3564	35	0.6436	9.9891	2	77.2°	2	3	7.6	7.4	7.2
12.9°	9.3488	33	9.3599	35	0.6401	9.9889	1	77.1°	3	4	11.4	11.1	10.8
13.0°	9.3521	33	9.3634	34	0.6366	9.9887	2	77.0°	4	5	15.2	14.8	14.4
13.1°	9.3554	32	9.3668	34	0.6332	9.9885	1	76.9°	5	6	19.0	18.5	18.0
13.2°	9.3586	32	9.3702	34	0.6298	9.9884	2	76.8°	6	7	22.8	22.2	21.6
13.3°	9.3618	32	9.3736	34	0.6264	9.9882	1	76.7°	7	8	26.6	25.9	25.2
13.4°	9.3650	32	9.3770	34	0.6230	9.9880	2	76.6°	8	9	30.4	29.6	28.8
13.5°	9.3682	31	9.3804	33	0.6196	9.9878	1	76.5°	9		34.2	33.3	32.4
13.6°	9.3713	32	9.3837	33	0.6163	9.9876	2	76.4°			35	34	33
13.7°	9.3745	30	9.3870	33	0.6130	9.9875	1	76.3°	1	2	3.5	3.4	3.3
13.8°	9.3775	31	9.3903	32	0.6097	9.9873	2	76.2°	2	3	7.0	6.8	6.6
13.9°	9.3806	31	9.3935	32	0.6065	9.9871	1	76.1°	3	4	10.5	10.2	9.9
14.0°	9.3837	30	9.3968	32	0.6032	9.9869	2	76.0°	4	5	14.0	13.6	13.2
14.1°	9.3867	30	9.4000	32	0.6000	9.9867	1	75.9°	5	6	17.5	17.0	16.5
14.2°	9.3897	30	9.4032	32	0.5968	9.9865	2	75.8°	6	7	21.0	20.4	19.8
14.3°	9.3927	30	9.4064	31	0.5936	9.9863	1	75.7°	7	8	24.5	23.8	23.1
14.4°	9.3957	29	9.4095	32	0.5905	9.9861	2	75.6°	8	9	28.0	27.2	26.4
14.5°	9.3986	29	9.4127	31	0.5873	9.9859	1	75.5°	9		31.5	30.6	29.7
14.6°	9.4015	29	9.4158	31	0.5842	9.9857	2	75.4°			32	31	30
14.7°	9.4044	29	9.4189	31	0.5811	9.9855	1	75.3°	1	2	3.2	3.1	3.0
14.8°	9.4073	29	9.4220	30	0.5780	9.9853	2	75.2°	2	3	6.4	6.2	6.0
14.9°	9.4102	28	9.4250	31	0.5750	9.9851	1	75.1°	3	4	9.6	9.3	9.0
15.0°	9.4130		9.4281		0.5719	9.9849	2	75.0°	4	5	12.8	12.4	12.0
									5	6	15.0	14.5	15.0
									6	7	18.0	17.6	18.0
									7	8	21.0	20.7	21.0
									8	9	24.0	23.6	24.0
									9		27.0	26.4	27.0
											29	28	2
									1	2	2.9	2.8	0.2
									2	3	5.8	5.6	0.4
									3	4	8.7	8.4	0.6
									4	5	11.6	11.2	0.8
									5	6	14.5	14.0	1.0
									6	7	17.4	16.8	1.2
									7	8	20.3	19.6	1.4
									8	9	23.2	22.4	1.6
									9		26.1	25.2	1.8
	log cos	diff.	log cot	com. diff.	log tan	log sin	diff.	Angle					

75°-80°									
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### TABLE III. LOGARITHMIC SINES

# 15°-20°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	diff.	Prop. Parts			
15.0°	9.4130		9.4281	30	0.5719	9.9849		75.0°	Difference		
15.1°	9.4158	28	9.4311	30	0.5689	9.9847	2	74.9°			
15.2°	9.4186	28	9.4341	30	0.5659	9.9845	2	74.8°			
15.3°	9.4214	28	9.4371	29	0.5629	9.9843	2	74.7°			
15.4°	9.4242		9.4400	30	0.5600	9.9841		74.6°	30 29		
15.5°	9.4269	27	9.4430	30	0.5570	9.9839	2	74.5°			
15.6°	9.4296	27	9.4459	29	0.5541	9.9837	2	74.4°			
15.7°	9.4323		9.4488	29	0.5512	9.9835		74.3°			
15.8°	9.4350	27	9.4517	29	0.5483	9.9833	2	74.2°	28 27		
15.9°	9.4377	26	9.4546	29	0.5454	9.9831	2	74.1°			
16.0°	9.4403		9.4575	28	0.5425	9.9828		74.0°			
16.1°	9.4430	27	9.4603	28	0.5397	9.9826	2	73.9°			
16.2°	9.4456	26	9.4632	28	0.5368	9.9824	2	73.8°	26 25		
16.3°	9.4482	26	9.4660	28	0.5340	9.9822	2	73.7°			
16.4°	9.4508		9.4688	28	0.5312	9.9820		73.6°			
16.5°	9.4533	25	9.4716	28	0.5284	9.9817	2	73.5°			
16.6°	9.4559	25	9.4744	27	0.5256	9.9815	2	73.4°	24 23		
16.7°	9.4584		9.4771	28	0.5229	9.9813		73.3°			
16.8°	9.4609	25	9.4799	28	0.5201	9.9811	2	73.2°			
16.9°	9.4634	25	9.4826	27	0.5174	9.9808	2	73.1°			
17.0°	9.4659		9.4853	27	0.5147	9.9806		73.0°	22 21		
17.1°	9.4684	25	9.4880	27	0.5120	9.9804	2	72.9°			
17.2°	9.4709	25	9.4907	27	0.5093	9.9801	2	72.8°			
17.3°	9.4733	24	9.4934	27	0.5066	9.9799	2	72.7°			
17.4°	9.4757		9.4961	26	0.5039	9.9797		72.6°	24 23		
17.5°	9.4781	24	9.4987	27	0.5013	9.9794	2	72.5°			
17.6°	9.4805	24	9.5014	26	0.4986	9.9792	2	72.4°			
17.7°	9.4829		9.5040	26	0.4960	9.9789		72.3°			
17.8°	9.4853	23	9.5066	26	0.4934	9.9787	2	72.2°	22 21		
17.9°	9.4876	23	9.5092	26	0.4908	9.9785	2	72.1°			
18.0°	9.4900		9.5118	25	0.4882	9.9782		72.0°			
18.1°	9.4923	23	9.5143	26	0.4857	9.9780	2	71.9°			
18.2°	9.4946	23	9.5169	26	0.4831	9.9777	2	71.8°	24 23		
18.3°	9.4969	23	9.5195	25	0.4805	9.9775	2	71.7°			
18.4°	9.4992		9.5220	25	0.4780	9.9772		71.6°			
18.5°	9.5015	23	9.5245	25	0.4755	9.9770	2	71.5°	22 21		
18.6°	9.5037	23	9.5270	25	0.4730	9.9767	2	71.4°			
18.7°	9.5060		9.5295	25	0.4705	9.9764		71.3°			
18.8°	9.5082	22	9.5320	25	0.4680	9.9762	2	71.2°			
18.9°	9.5104	22	9.5345	25	0.4655	9.9759	2	71.1°	22 21		
19.0°	9.5126		9.5370	24	0.4630	9.9757		71.0°			
19.1°	9.5148	22	9.5394	25	0.4606	9.9754	2	70.9°			
19.2°	9.5170	22	9.5419	24	0.4581	9.9751	2	70.8°			
19.3°	9.5192	21	9.5443	24	0.4557	9.9749	2	70.7°	22 21		
19.4°	9.5213		9.5467	24	0.4533	9.9746		70.6°			
19.5°	9.5235	21	9.5491	25	0.4509	9.9743	2	70.5°			
19.6°	9.5256	22	9.5516	23	0.4484	9.9741	2	70.4°			
19.7°	9.5278		9.5539	24	0.4461	9.9738		70.3°	22 21		
19.8°	9.5299	21	9.5563	24	0.4437	9.9735	2	70.2°			
19.9°	9.5320	21	9.5587	24	0.4413	9.9733	2	70.1°			
20.0°	9.5341	21	9.5611	24	0.4389	9.9730	2	70.0°			
	log cos	diff.	log cot	com. diff.	log tan	log sin	diff.	Angle			

# 70°-75°



31  
14



# 30°-35°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	diff.		Prop. Parts	
									Difference	
30.0°	9.6990		9.7614		0.2386	9.9375		60.0°	Extra digit	
30.1°	9.7003	13	9.7632	18	0.2368	9.9371	4	59.9°		
30.2°	9.7016	13	9.7649	17	0.2351	9.9367	4	59.8°		
30.3°	9.7029	13	9.7667	17	0.2333	9.9362	5	59.7°		
30.4°	9.7042	13	9.7684	17	0.2316	9.9358	4	59.6°		
30.5°	9.7055	13	9.7701	17	0.2299	9.9353	5	59.5°		
30.6°	9.7068	13	9.7719	18	0.2281	9.9349	4	59.4°		
30.7°	9.7080	12	9.7736	17	0.2264	9.9344	5	59.3°		
30.8°	9.7093	13	9.7753	17	0.2247	9.9340	4	59.2°		
30.9°	9.7106	12	9.7771	18	0.2229	9.9335	5	59.1°		
31.0°	9.7118		9.7788		0.2212	9.9331	4	59.0°	1	1.8
31.1°	9.7131	13	9.7805	17	0.2195	9.9326	5	58.9°	2	3.6
31.2°	9.7144	12	9.7822	17	0.2178	9.9322	4	58.8°	3	5.4
31.3°	9.7156	12	9.7839	17	0.2161	9.9317	5	58.7°	4	7.2
31.4°	9.7168	13	9.7856	17	0.2144	9.9312	4	58.6°	5	8.8
31.5°	9.7181	12	9.7873	17	0.2127	9.9308	5	58.5°	6	10.2
31.6°	9.7193	12	9.7890	17	0.2110	9.9303	5	58.4°	7	11.9
31.7°	9.7205	13	9.7907	17	0.2093	9.9298	4	58.3°	8	13.6
31.8°	9.7218	12	9.7924	17	0.2076	9.9294	5	58.2°	9	15.3
31.9°	9.7230	12	9.7941	17	0.2059	9.9289	5	58.1°		
32.0°	9.7242		9.7958		0.2042	9.9284	5	58.0°	1	1.6
32.1°	9.7254	12	9.7975	17	0.2025	9.9279	4	57.9°	2	3.2
32.2°	9.7266	12	9.7992	17	0.2008	9.9275	5	57.8°	3	4.8
32.3°	9.7278	12	9.8008	16	0.1992	9.9270	5	57.7°	4	6.4
32.4°	9.7290	12	9.8025	17	0.1975	9.9265	5	57.6°	5	8.0
32.5°	9.7302	12	9.8042	17	0.1958	9.9260	5	57.5°	6	9.6
32.6°	9.7314	12	9.8059	16	0.1941	9.9255	4	57.4°	7	11.2
32.7°	9.7326	11	9.8075	17	0.1925	9.9251	5	57.3°	8	12.8
32.8°	9.7338	11	9.8092	17	0.1908	9.9246	5	57.2°	9	14.4
32.9°	9.7349	12	9.8109	16	0.1891	9.9241	5	57.1°		
33.0°	9.7361		9.8125		0.1875	9.9236	5	57.0°	1	1.3
33.1°	9.7373	11	9.8142	16	0.1858	9.9231	5	56.9°	2	1.2
33.2°	9.7384	11	9.8158	17	0.1842	9.9226	5	56.8°	3	2.4
33.3°	9.7396	11	9.8175	16	0.1825	9.9221	5	56.7°	4	3.6
33.4°	9.7407	12	9.8191	17	0.1809	9.9216	5	56.6°	5	4.8
33.5°	9.7419	11	9.8208	16	0.1792	9.9211	5	56.5°	6	6.0
33.6°	9.7430	11	9.8224	17	0.1776	9.9206	5	56.4°	7	7.2
33.7°	9.7442	11	9.8241	16	0.1759	9.9201	5	56.3°	8	8.4
33.8°	9.7453	11	9.8257	17	0.1743	9.9196	5	56.2°	9	9.6
33.9°	9.7464	12	9.8274	16	0.1726	9.9191	5	56.1°	8	10.8
34.0°	9.7476		9.8290		0.1710	9.9186	5	56.0°	1	1.1
34.1°	9.7487	11	9.8306	17	0.1694	9.9181	5	55.9°	2	2.2
34.2°	9.7498	11	9.8323	16	0.1677	9.9175	5	55.8°	3	3.3
34.3°	9.7509	11	9.8339	16	0.1661	9.9170	5	55.7°	4	4.4
34.4°	9.7520	11	9.8355	16	0.1645	9.9165	5	55.6°	5	5.5
34.5°	9.7531	11	9.8371	17	0.1629	9.9160	5	55.5°	6	6.6
34.6°	9.7542	11	9.8388	16	0.1612	9.9155	6	55.4°	7	7.7
34.7°	9.7553	11	9.8404	16	0.1596	9.9149	5	55.3°	8	8.8
34.8°	9.7564	11	9.8420	16	0.1580	9.9144	5	55.2°	9	9.9
34.9°	9.7575	11	9.8436	16	0.1564	9.9139	5	55.1°		
35.0°	9.7586		9.8452		0.1548	9.9134		55.0°	1	0.5
									2	1.0
									3	1.5
									4	2.0
									5	2.5
									6	3.0
									7	3.5
									8	4.0
									9	4.5
									5	6
									0.5	0.6
									1.0	1.2
									1.5	1.8
									2.0	2.4
									2.5	3.0
									3.0	3.6
									3.5	4.2
									4.0	4.8
									4.5	5.4
	log cos	diff.	log cot	com. diff.	log tan	log sin	diff.	Angle		

# 55°-60°

### TABLE III. LOGARITHMIC SINES

# 35°-40°

Angle	log sin	diff.	log tan	com. diff.	log cot	log cos	diff.		Prop. Parts		
35.0°	9.7586		9.8452		0.1548	9.9134		55.0°	Extra digit	Difference	
35.1°	9.7597	11	9.8468	16	0.1532	9.9128	6	54.9°			
35.2°	9.7607	10	9.8484	16	0.1516	9.9123	5	54.8°			
35.3°	9.7618	11	9.8501	17	0.1499	9.9118	5	54.7°			
35.4°	9.7629		9.8517		0.1483	9.9112		54.6°			
35.5°	9.7640	11	9.8533	16	0.1467	9.9107	5	54.5°			
35.6°	9.7650	10	9.8549	16	0.1451	9.9101	6	54.4°			
35.7°	9.7661	11	9.8565	16	0.1435	9.9096	5	54.3°			
35.8°	9.7671	10	9.8581	16	0.1419	9.9091	5	54.2°			
35.9°	9.7682	11	9.8597	16	0.1403	9.9085	6	54.1°			
36.0°	9.7692	10	9.8613	16	0.1387	9.9080	5	54.0°			
36.1°	9.7703	11	9.8629	15	0.1371	9.9074	6	53.9°	1	17	16
36.2°	9.7713	10	9.8644	16	0.1356	9.9069	5	53.8°	2	3.4	3.2
36.3°	9.7723	11	9.8660	16	0.1340	9.9063	6	53.7°	3	5.1	4.8
36.4°	9.7734		9.8676		0.1324	9.9057		53.6°	4	6.8	6.4
36.5°	9.7744	10	9.8692	16	0.1308	9.9052	5	53.5°	5	8.5	8.0
36.6°	9.7754	11	9.8708	16	0.1292	9.9046	6	53.4°	6	10.2	9.6
36.7°	9.7764	10	9.8724	16	0.1276	9.9041	5	53.3°	7	11.9	11.2
36.8°	9.7774	11	9.8740	15	0.1260	9.9035	6	53.2°	8	13.6	12.8
36.9°	9.7785	10	9.8755	16	0.1245	9.9029	5	53.1°	9	15.3	14.4
37.0°	9.7795	11	9.8771	16	0.1229	9.9023	6	53.0°			
37.1°	9.7805	10	9.8787	16	0.1213	9.9018	5	52.9°	1	1.7	1.6
37.2°	9.7815	11	9.8803	16	0.1197	9.9012	6	52.8°	2	3.4	3.2
37.3°	9.7825	10	9.8818	15	0.1182	9.9006	5	52.7°	3	5.1	4.8
37.4°	9.7835	11	9.8834	16	0.1166	9.9000	6	52.6°	4	6.8	6.4
37.5°	9.7844	10	9.8850	15	0.1150	9.8995	5	52.5°	5	8.5	8.0
37.6°	9.7854	11	9.8865	16	0.1135	9.8989	6	52.4°	6	10.2	9.6
37.7°	9.7864	10	9.8881	16	0.1119	9.8983	5	52.3°	7	11.9	11.2
37.8°	9.7874	11	9.8897	15	0.1103	9.8977	6	52.2°	8	13.6	12.8
37.9°	9.7884	10	9.8912	16	0.1088	9.8971	5	52.1°	9	15.3	14.4
38.0°	9.7893	11	9.8928	16	0.1072	9.8965	6	52.0°			
38.1°	9.7903	10	9.8944	15	0.1056	9.8959	5	51.9°	1	1.7	1.6
38.2°	9.7913	11	9.8959	16	0.1041	9.8953	6	51.8°	2	3.4	3.2
38.3°	9.7922	10	9.8975	15	0.1025	9.8947	5	51.7°	3	5.1	4.8
38.4°	9.7932	11	9.8990	16	0.1010	9.8941	6	51.6°	4	6.8	6.4
38.5°	9.7941	10	9.9006	16	0.0994	9.8935	5	51.5°	5	8.5	8.0
38.6°	9.7951	11	9.9022	15	0.0978	9.8929	6	51.4°	6	10.2	9.6
38.7°	9.7960	10	9.9037	16	0.0963	9.8923	5	51.3°	7	11.9	11.2
38.8°	9.7970	11	9.9053	15	0.0947	9.8917	6	51.2°	8	13.6	12.8
38.9°	9.7979	10	9.9068	16	0.0932	9.8911	5	51.1°	9	15.3	14.4
39.0°	9.7989	11	9.9084	15	0.0916	9.8905	6	51.0°			
39.1°	9.7998	10	9.9099	16	0.0901	9.8899	5	50.9°	1	1.7	1.6
39.2°	9.8007	11	9.9115	15	0.0885	9.8893	6	50.8°	2	3.4	3.2
39.3°	9.8017	10	9.9130	16	0.0870	9.8887	5	50.7°	3	5.1	4.8
39.4°	9.8026	11	9.9146	15	0.0854	9.8880	6	50.6°	4	6.8	6.4
39.5°	9.8035	10	9.9161	16	0.0839	9.8874	5	50.5°	5	8.5	8.0
39.6°	9.8044	11	9.9176	15	0.0824	9.8868	6	50.4°	6	10.2	9.6
39.7°	9.8053	10	9.9192	16	0.0808	9.8862	5	50.3°	7	11.9	11.2
39.8°	9.8063	11	9.9207	15	0.0793	9.8855	6	50.2°	8	13.6	12.8
39.9°	9.8072	10	9.9223	16	0.0777	9.8849	5	50.1°	9	15.3	14.4
40.0°	9.8081	11	9.9238	15	0.0762	9.8843	6	50.0°			
	log cos	diff.	log cot	com. diff.	log tan	log sin	diff.	Angle			

# 50°-55°



TABLE OF NATURAL VALUES OF THE TRIGONOMETRIC FUNCTIONS

Angle	sin	cos	tan	cot	sec	csc	
0°	.0000	1.0000	.0000	$\infty$	1.0000	$\infty$	90°
1°	.0175	.9998	.0175	57.290	1.0002	57.299	89°
2°	.0349	.9994	.0349	28.636	1.0006	28.654	88°
3°	.0523	.9986	.0524	19.081	1.0014	19.107	87°
4°	.0698	.9976	.0699	14.300	1.0024	14.336	86°
5°	.0872	.9962	.0875	11.430	1.0038	11.474	85°
6°	.1045	.9945	.1051	9.5144	1.0055	9.5668	84°
7°	.1219	.9925	.1228	8.1443	1.0075	8.2055	83°
8°	.1392	.9903	.1405	7.1154	1.0098	7.1853	82°
9°	.1564	.9877	.1584	6.3138	1.0125	6.3925	81°
10°	.1736	.9848	.1763	5.6713	1.0154	5.7588	80°
11°	.1908	.9816	.1944	5.1446	1.0187	5.2408	79°
12°	.2079	.9781	.2126	4.7046	1.0223	4.8097	78°
13°	.2250	.9744	.2309	4.3315	1.0263	4.4454	77°
14°	.2419	.9703	.2493	4.0108	1.0306	4.1336	76°
15°	.2588	.9659	.2679	3.7321	1.0353	3.8637	75°
16°	.2756	.9613	.2867	3.4874	1.0403	3.6280	74°
17°	.2924	.9563	.3057	3.2709	1.0457	3.4203	73°
18°	.3090	.9511	.3249	3.0777	1.0515	3.2361	72°
19°	.3256	.9455	.3443	2.9042	1.0576	3.0716	71°
20°	.3420	.9397	.3640	2.7475	1.0642	2.9238	70°
21°	.3584	.9336	.3839	2.6051	1.0711	2.7904	69°
22°	.3746	.9272	.4040	2.4751	1.0785	2.6695	68°
23°	.3907	.9205	.4245	2.3559	1.0864	2.5593	67°
24°	.4067	.9135	.4452	2.2460	1.0946	2.4586	66°
25°	.4226	.9063	.4663	2.1445	1.1034	2.3662	65°
26°	.4384	.8988	.4877	2.0503	1.1126	2.2812	64°
27°	.4540	.8910	.5095	1.9626	1.1223	2.2027	63°
28°	.4695	.8829	.5317	1.8807	1.1326	2.1301	62°
29°	.4848	.8746	.5543	1.8040	1.1434	2.0627	61°
30°	.5000	.8660	.5774	1.7321	1.1547	2.0000	60°
31°	.5150	.8572	.6009	1.6643	1.1666	1.9416	59°
32°	.5299	.8480	.6249	1.6003	1.1792	1.8871	58°
33°	.5446	.8387	.6494	1.5399	1.1924	1.8361	57°
34°	.5592	.8290	.6745	1.4826	1.2062	1.7883	56°
35°	.5736	.8192	.7002	1.4281	1.2208	1.7434	55°
36°	.5878	.8090	.7265	1.3764	1.2361	1.7013	54°
37°	.6018	.7986	.7536	1.3270	1.2521	1.6616	53°
38°	.6157	.7880	.7813	1.2799	1.2690	1.6243	52°
39°	.6293	.7771	.8098	1.2349	1.2868	1.5890	51°
40°	.6428	.7660	.8391	1.1918	1.3054	1.5557	50°
41°	.6561	.7547	.8693	1.1504	1.3250	1.5243	49°
42°	.6691	.7431	.9004	1.1106	1.3456	1.4945	48°
43°	.6820	.7314	.9325	1.0724	1.3673	1.4663	47°
44°	.6947	.7193	.9657	1.0355	1.3902	1.4396	46°
45°	.7071	.7071	1.0000	1.0000	1.4142	1.4142	45°
	cos	sin	cot	tan	csc	sec	Angle

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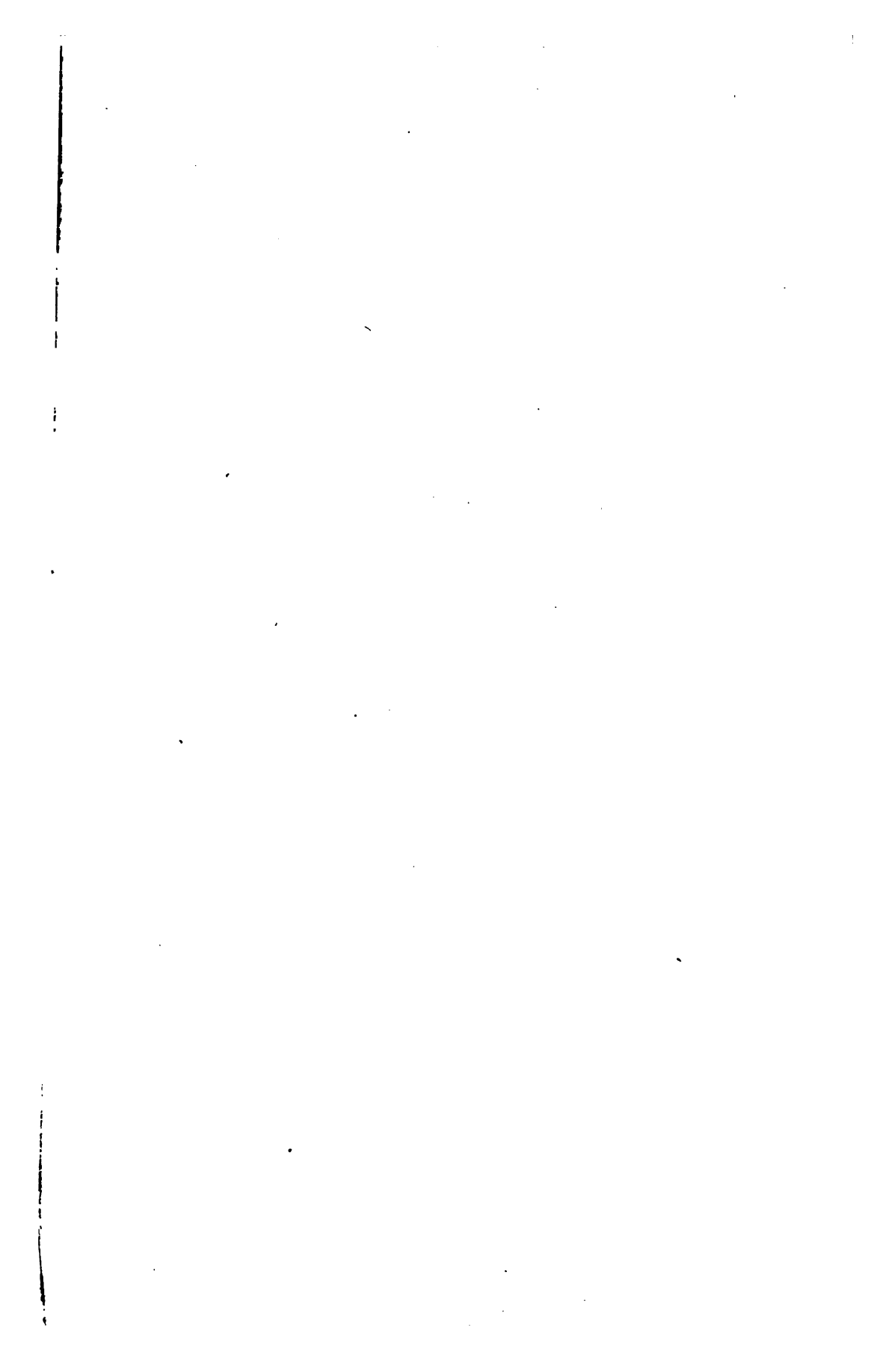
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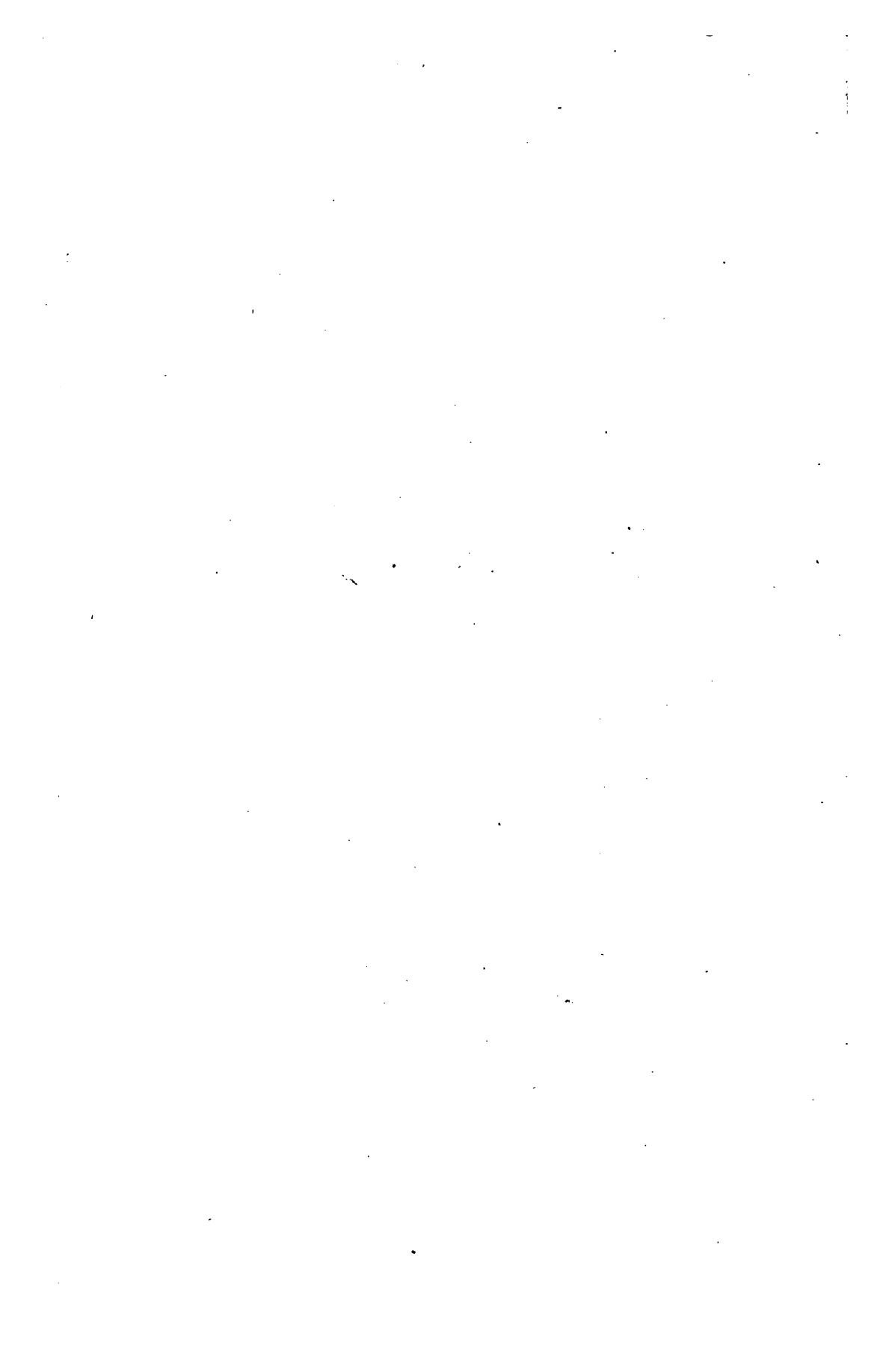
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